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(54) Title: NOVEL GENES, COMPOSITIONS, KITS, AND METHODS FOR IDENTIFICATION, ASSESSMENT, PREVENTION, AND THERAPY OF CERVICAL CANCER

# NOVEL GENES, COMPOSITIONS, KITS, AND METHODS FOR IDENTIFICATION, ASSESSMENT, PREVENTION, AND THERAPY OF CERVICAL CANCER

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#### RELATED APPLICATIONS

The present application claims priority to U.S. provisional application serial no. 60/169,681, filed on December 8, 1999, U.S. provisional application serial no. 60/171,350, filed on December 21, 1999, U.S. provisional application serial no. 60/189,315, filed on March 14, 2000, U.S. provisional application serial no. 60/203,791, filed on May 12, 2000, and U.S. provisional application serial no. 60/210,600, filed on June 9, 2000, all of which are expressly incorporated by reference.

#### FIELD OF THE INVENTION

The field of the invention is cervical cancer, including diagnosis, 15 characterization, management, and therapy of cervical cancer.

#### BACKGROUND OF THE INVENTION

The increased number of cancer cases reported in the United States, and, indeed, around the world, is a major concern. Currently there are only a handful of treatments available for specific types of cancer, and these provide no absolute guarantee of success. In order to be most effective, these treatments require not only an early detection of the malignancy, but a reliable assessment of the severity of the malignancy.

Cancer of the cervix is one of the most common malignancies in women and remains a significant public health problem throughout the world. In the United States alone, invasive cervical cancer accounts for approximately 19% of all gynecological cancers. In 1996, it is estimated that there will be 14,700 newly diagnosed cases and 4900 deaths attributed to this disease (American Cancer Society, Cancer Facts & Figures 1996, Atlanta, Ga.: American Cancer Society, 1996). In many developing countries, where mass screening programs are not widely available, the clinical problem is more serious. Worldwide, the number of new cases is estimated to be 471,000 with a four-year survival rate of only 40% (Munoz et al., 1989, *Epidemiology of Cervical Cancer* In: "Human Papillomavirus", New York, Oxford Press, pp 9-39; National Institutes of

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Health, Consensus Development Conference Statement on Cervical Cancer, Apr.1-3, 1996).

The precursor to cervical cancer is dysplasia, also known in the art as cervical intraepithelial neoplasia (CIN) or squamous intraepithelial lesions (SIL). While it is not understood how normal cells become transformed, the concept of a continuous spectrum of histopathological change from normal, stratified epithelium through CIN to invasive cancer has been widely accepted for many years. A large body of epidemiological and molecular biological evidence has established human papillomavirus (HPV) infection as a causative factor in cervical cancer. HPV is found in 85% or more of squamous cell invasive lesions, which represent the most common histologic type seen in cervical carcinoma. Additional cofactors have also been identified, including oncogenes that have been activated by point mutations and chromosomal translocations or deletions.

In light of this, cervical cancer remains a highly preventable form of cancer when pre-invasive lesions are detected early. Cytological examination of Papanicolaoustained cervical smears (also referred to as Pap smears) is currently the principle method for detecting cervical cancer. Not surprisingly, the effectiveness of Pap smear screening varies depending not only upon the quality of the sample being used, but also upon subjective parameters that are inherent to the analysis. In addition, despite the historical success of the test, concerns have arisen regarding its ability to reliably predict the behavior of some pre-invasive lesions (Ostor et al., 1993, Int. J. Gynecol. Pathol. 12: 186-192; and Genest et al., 1993, Human Pathol. 24: 730-736).

It would be therefore be desirable to provide specific methods and reagents for the diagnosis, staging, prognosis, monitoring, and treatment of diseases associated with cervical cancer, or to indicate a predisposition to such for preventative measures.

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#### SUMMARY OF THE INVENTION

The invention relates to novel genes associated with cervical cancer as well as methods of assessing whether a patient is afflicted with cervical cancer. "Cervical cancer" as used herein includes pre-malignant conditions, e.g., CIN and SIL. The methods of the present invention comprise the step of comparing the level of expression of a novel marker in a patient sample, wherein the marker is listed within Tables 1-4, and the normal level of expression of the marker in a control, e.g., a sample from a

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patient without cervical cancer. A significant difference between the level of expression of the marker in the patient sample and the normal level is an indication that the patient is afflicted with cervical cancer or has a pre-malignant condition (e.g., CIN and/or SIL).

In one method, the marker(s) are preferably selected such that the positive predictive value of the method is at least about 10%. Also preferred are embodiments of the method wherein the marker is differentially-expressed by at least two-fold in at least about 20% of any of the following conditions: stage 0 cervical cancer patients, stage I cervical cancer patients, stage II cervical cancer patients, stage IV cervical cancer patients, grade I cervical cancer patients, grade II cervical cancer patients, grade II cervical cancer patients, squamous cell (epidermoid) cervical cancer patients, cervical adenocarcinoma patients, cervical adenosquamous carcinoma patients, small-cell cervical carcinoma patients, malignant cervical cancer patients, patients with primary carcinomas of the cervix, patients with primary malignant lymphomas of the cervix and patients with secondary malignant lymphomas of the cervix, and all other types of cancers, malignancies and transformations associated with the cervix.

In one embodiment of the methods of the present invention, the sample comprises cells obtained from the patient. The cells may be found in a cervical smear collected, for example, by a cervical brush. In another embodiment, the patient sample is a cervical-associated body fluid. Such fluids include, for example, blood fluids, lymph, ascitic fluids, gynecological fluids, urine, and fluids collected by peritoneal rinsing.

In accordance with the methods of the present invention, the presence and/or level of expression of the marker in a sample can be assessed, for example, by detecting the presence in the sample of:

- a protein corresponding to the marker or a fragment of the protein (e.g. using a reagent, such as an antibody, an antibody derivative, or an antibody fragment, which binds specifically with the protein or a fragment of the protein)
- a metabolite which is produced directly (i.e., catalyzed) or indirectly by a protein corresponding to the marker

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• a transcribed polynucleotide (e.g. an mRNA or a cDNA), or fragment thereof, having at least a portion with which the marker is substantially homologous (e.g. by contacting a mixture of transcribed polynucleotides obtained from the sample with a substrate having one or more of the markers listed within Tables 1-4 fixed thereto at selected positions)

 a transcribed polynucleotide or fragment thereof, wherein the polynucleotide anneals with the marker under stringent hybridization conditions.

The methods of the present invention are particularly useful for identifying patients with a pre-malignant condition such as CIN and/or SIL. The methods are also useful for further diagnosing patients having an identified cervical mass or symptoms associated with cervical cancer. The methods of the present invention can further be of particular use with patients having an enhanced risk of developing cervical cancer (e.g., patients having a familial history of cervical cancer and patients identified as having a mutant oncogene). The methods of the present invention may further be of particular use in monitoring the efficacy of treatment of a cervical cancer patient (e.g. the efficacy of chemotherapy).

The methods of the present invention may be performed using a plurality (e.g. 2, 3, 5, or 10 or more) of markers. According to a method involving a plurality of markers, the level of expression in the sample of each of a plurality of markers independently selected from the markers listed in Tables 1-4 is compared with the normal level of expression of each of the plurality of markers in samples of the same type obtained from control humans not afflicted with cervical cancer. A significantly enhanced level of expression in the sample of one or more of the markers listed in Tables 1-4, or some combination thereof, relative to that marker's corresponding normal levels, is an indication that the patient is afflicted with cervical cancer. The markers of Tables 1-4 may also be used in combination with known cervical cancer markers in the methods of the present invention.

In a preferred method of assessing whether a patient is afflicted with cervical cancer (e.g., new detection ("screening"), detection of recurrence, reflex testing), the method comprises comparing:

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- a) the level of expression of a marker in a patient sample, wherein at least one marker is selected from the markers of Tables 1-4, and
- b) the normal level of expression of the marker in a control non-cervical cancer sample.
- A significant difference between the level of expression of the marker in the patient sample and the normal level is an indication that the patient is afflicted with cervical cancer.

The invention further relates to a method of assessing the efficacy of a therapy

10 for inhibiting cervical cancer in a patient. This method comprises comparing:

- a) expression of a marker in a first sample obtained from the patient prior to providing at least a portion of the therapy to the patient, wherein the marker is selected from the group consisting of the markers listed within Tables 1-4, and
- b) expression of the marker in a second sample obtained from the patient following provision of the portion of the therapy.

A significantly lower level of expression of the marker in the second sample, relative to the first sample, is an indication that the therapy is efficacious for inhibiting cervical cancer in the patient.

It will be appreciated that in this method the "therapy" may be any therapy for treating cervical cancer including, but not limited to, chemotherapy, radiation therapy and surgical removal of tissue, e.g., a cervical tumor. Thus, the methods of the invention may be used to evaluate a patient before, during and after therapy, for example, to evaluate the reduction in tumor burden.

The present invention therefore further comprises a method for monitoring the progression of cervical cancer in a patient, the method comprising:

- a) detecting in a patient sample at a first time point, the expression of a marker, wherein the marker is selected from the group consisting of the markers listed in Tables 1-4;
  - b) repeating step a) at a subsequent time point in time; and
- c) comparing the level of expression detected in steps a) and b), and therefrom monitoring the progression of cervical cancer in the patient.

The invention also includes a method of selecting a composition for inhibiting cervical cancer in a patient. This method comprises the steps of:

a) obtaining a sample comprising cancer cells from the patient;

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- b) separately maintaining aliquots of the sample in the presence of a plurality of test compositions;
- c) comparing expression of a marker listed within Tables 1-4 in each of the aliquots; and
- d) selecting one of the test compositions which induces a lower level of expression of the marker in the aliquot containing that test composition, relative to other test compositions.

In addition, the invention includes a method of inhibiting cervical cancer in a patient. This method comprises the steps of:

- a) obtaining a sample comprising cancer cells from the patient;
  - b) separately maintaining aliquots of the sample in the presence of a plurality of test compositions;
  - c) comparing expression of a marker listed within Tables 1-4 in each of the aliquots; and
  - d) administering to the patient at least one of the test compositions which induces a lower level of expression of the marker in the aliquot containing that test composition, relative to other test compositions.

The invention also includes a kit for assessing whether a patient is afflicted with cervical cancer. This kit comprises reagents for assessing expression of a marker listed within Tables 1-4.

In another aspect, the invention relates to a kit for assessing the suitability of each of a plurality of compounds for inhibiting a cervical cancer in a patient. The kit comprises a reagent for assessing expression of a marker listed within Tables 1-4, and may also comprise a plurality of compounds.

In another aspect, the invention relates to a kit for assessing the presence of cervical cancer cells. This kit comprises an antibody, wherein the antibody binds specifically with a protein corresponding to a marker listed within Tables 1-4. The kit may also comprise a plurality of antibodies, wherein the plurality binds specifically with a protein corresponding to a different marker listed within Tables 1-4.

The invention also includes a kit for assessing the presence of cervical cancer cells, wherein the kit comprises a nucleic acid probe. The probe binds specifically with a transcribed polynucleotide corresponding to a marker listed within Tables 1-4. The kit may also comprise a plurality of probes, wherein each of the probes binds specifically with a transcribed polynucleotide corresponding to a different marker listed within Tables 1-4.

The invention further relates to a method of making an isolated hybridoma which produces an antibody useful for assessing whether a patient is afflicted with cervical cancer. The method comprises isolating a protein or protein fragment corresponding to a marker listed within Tables 1-4, immunizing a mammal using the isolated protein or protein fragment, isolating splenocytes from the immunized mammal, fusing the isolated splenocytes with an immortalized cell line to form hybridomas, and screening individual hybridomas for production of an antibody which specifically binds with the protein or protein fragment to isolate the hybridoma. The invention also includes an antibody produced by this method.

The invention further includes a method of assessing the cervical carcinogenic potential of a test compound. This method comprises the steps of:

- a) maintaining separate aliquots of cervical cells in the presence and absence of the test compound; and
- b) comparing expression of a marker in each of the aliquots.

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The marker is selected from those listed within Tables 1-4. A significantly enhanced level of expression of the marker in the aliquot maintained in the presence of (or exposed to) the test compound, relative to the aliquot maintained in the absence of the test compound, is an indication that the test compound possesses cervical carcinogenic potential.

Additionally, the invention includes a kit for assessing the cervical carcinogenic potential of a test compound. The kit comprises cervical cells and a reagent for assessing expression of a marker in each of the aliquots. The marker is selected from those listed within Tables 1-4.

The invention further relates to a method of treating a patient afflicted with cervical cancer. This method comprises providing to cells of the patient an antisense oligonucleotide complementary to a polynucleotide corresponding to a marker listed within Tables 1-4.

The invention includes a method of inhibiting cervical cancer in a patient at risk for developing cervical cancer. This method comprises inhibiting expression or overexpression of a gene corresponding to a marker listed within Tables 1-4.

It will be appreciated that the methods and kits of the present invention may also include known cancer markers including known cervical cancer markers. It will further be appreciated that the methods and kits may be used to identify cancers other than cervical cancer.

#### DETAILED DESCRIPTION OF THE INVENTION

The invention relates to newly discovered genes associated with the cancerous state of cervical cells. It has been discovered that the level of expression of these individual genes, also referred to as markers, and combinations of these genes correlates with the presence of cervical cancer or a pre-malignant condition in a patient. Methods are provided for detecting the presence of cervical cancer in a sample, the absence of cervical cancer in a sample, the stage of cervical cancer, and with other characteristics of cervical cancer that are relevant to prevention, diagnosis, characterization and therapy of cervical cancer in a patient. As used herein, "cervical cancer" includes pre-malignant conditions including CIN and SIL.

#### **Definitions**

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As used herein, each of the following terms has the meaning associated with it in this section.

The articles "a" and "an" are used herein to refer to one or to more than one (i.e. to at least one) of the grammatical object of the article. By way of example, "an element" means one element or more than one element.

A "marker" is a naturally-occurring polymer corresponding to at least one of the novel nucleic acids listed within Tables 1-4. For example, markers include, without limitation, sense and anti-sense strands of genomic DNA (i.e. including any introns

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occurring therein), RNA generated by transcription of genomic DNA (i.e. prior to splicing), RNA generated by splicing of RNA transcribed from genomic DNA, and proteins generated by translation of spliced RNA (i.e. including proteins both before and after cleavage of normally cleaved regions such as transmembrane signal sequences).

As used herein, "marker" may also include a cDNA made by reverse transcription of an RNA generated by transcription of genomic DNA (including spliced RNA).

As used herein a "polynucleotide corresponds to" another (a first) polynucleotide if it is related to the first polynucleotide by any of the following relationships: The second polynucleotide comprises the first polynucleotide and the second polynucleotide 10 encodes a gene product; 2) The second polynucleotide is 5' or 3' to the first polynucleotide in cDNA, RNA, genomic DNA, or fragment of any of these polynucleotides. For example, a second polynucleotide may be a fragment of a gene that includes the first and second polynucleotides. The first and second polynucleotides are related in that they are components of the gene coding for a gene product, such as a protein or antibody. However, it is not necessary that the second polynucleotide comprises or overlaps with the first polynucleotide to be encompassed within the definition of "corresponding to" as used herein. For example, the first polynucleotide may be a fragment of a 3' untranslated region of the second polynucleotide. The first and second polynucleotide may be fragments of a gene coding for a gene product. The second polynucleotide may be an exon of the gene while the first polynucleotide may be an intron of the gene; 3) The second polynucleotide is the complement of the first polynucleotide.

The term "probe" refers to any molecule which is capable of selectively binding to a specifically intended target molecule, for example a marker of the invention. Probes can be either synthesized by one skilled in the art, or derived from appropriate biological preparations. For purposes of detection of the target molecule, probes may be specifically designed to be labeled, as described herein. Examples of molecules that can be utilized as probes include, but are not limited to, RNA, DNA, proteins, antibodies, and organic monomers.

A "cervical-associated" body fluid is a fluid which, when in the body of a patient, contacts or passes through cervical cells or into which cells or proteins shed from cervical cells are capable of passing. Exemplary cervical-associated body fluids

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include blood fluids, lymph, ascites, gynecological fluids, cystic fluid, urine, and fluids collected by peritoneal rinsing.

The "normal" level of expression of a marker is the level of expression of the marker in cervical cells of a patient, e.g. a human, not afflicted with cervical cancer.

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"Over-expression" and "under-expression" of a marker refer to expression of the marker of a patient at a greater or lesser level, respectively, than normal level of expression of the marker (e.g. at least two-fold greater or lesser level).

As used herein, the term "promoter/regulatory sequence" means a nucleic acid sequence which is required for expression of a gene product operably linked to the promoter/regulatory sequence. In some instances, this sequence may be the core promoter sequence and in other instances, this sequence may also include an enhancer sequence and other regulatory elements which are required for expression of the gene product. The promoter/regulatory sequence may, for example, be one which expresses the gene product in a tissue-specific manner.

A "constitutive" promoter is a nucleotide sequence which, when operably linked with a polynucleotide which encodes or specifies a gene product, causes the gene product to be produced in a living human cell under most or all physiological conditions of the cell.

An "inducible" promoter is a nucleotide sequence which, when operably linked with a polynucleotide which encodes or specifies a gene product, causes the gene product to be produced in a living human cell substantially only when an inducer which corresponds to the promoter is present in the cell.

A "tissue-specific" promoter is a nucleotide sequence which, when operably linked with a polynucleotide which encodes or specifies a gene product, causes the gene product to be produced in a living human cell substantially only if the cell is a cell of the tissue type corresponding to the promoter.

A "transcribed polynucleotide" is a polynucleotide (e.g. an RNA, a cDNA, or an analog of one of an RNA or cDNA) which is complementary to or homologous with all or a portion of a mature RNA made by transcription of a genomic DNA corresponding to a marker of the invention and normal post-transcriptional processing (e.g. splicing), if any, of the transcript.

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"Complementary" refers to the broad concept of sequence complementarity between regions of two nucleic acid strands or between two regions of the same nucleic acid strand. It is known that an adenine residue of a first nucleic acid region is capable of forming specific hydrogen bonds ("base pairing") with a residue of a second nucleic acid region which is antiparallel to the first region if the residue is thymine or uracil. Similarly, it is known that a cytosine residue of a first nucleic acid strand is capable of base pairing with a residue of a second nucleic acid strand which is antiparallel to the first strand if the residue is guanine. A first region of a nucleic acid is complementary to a second region of the same or a different nucleic acid if, when the two regions are arranged in an antiparallel fashion, at least one nucleotide residue of the first region is capable of base pairing with a residue of the second region. Preferably, the first region comprises a first portion and the second region comprises a second portion, whereby, when the first and second portions are arranged in an antiparallel fashion, at least about 50%, and preferably at least about 75%, at least about 90%, or at least about 95% of the nucleotide residues of the first portion are capable of base pairing with nucleotide residues in the second portion. More preferably, all nucleotide residues of the first portion are capable of base pairing with nucleotide residues in the second portion.

"Homologous" as used herein, refers to nucleotide sequence similarity between two regions of the same nucleic acid strand or between regions of two different nucleic acid strands. When a nucleotide residue position in both regions is occupied by the same nucleotide residue, then the regions are homologous at that position. A first region is homologous to a second region if at least one nucleotide residue position of each region is occupied by the same residue. Homology between two regions is expressed in terms of the proportion of nucleotide residue positions of the two regions that are occupied by the same nucleotide residue. By way of example, a region having the nucleotide sequence 5'-TATGCC-3' and a region having the nucleotide sequence 5'-TATGGC-3' share 50% homology. Preferably, the first region comprises a first portion and the second region comprises a second portion, whereby, at least about 50%, and preferably at least about 75%, at least about 90%, or at least about 95% of the nucleotide residue positions of each of the portions are occupied by the same nucleotide residue. More preferably, all nucleotide residue positions of each of the portions are occupied by the same nucleotide residue.

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A marker is "fixed" to a substrate if it is covalently or non-covalently associated with the substrate such the substrate can be rinsed with a fluid (e.g. standard saline citrate, pH 7.4) without a substantial fraction of the marker dissociating from the substrate.

As used herein, a "naturally-occurring" nucleic acid molecule refers to an RNA or DNA molecule having a nucleotide sequence that occurs in nature (e.g. encodes a natural protein).

Expression of a marker in a patient is "significantly" higher than the normal level of expression of a marker if the level of expression of the marker is greater than the normal level by an amount greater than the standard error of the assay employed to assess expression, and preferably at least twice, and more preferably three, four, five or ten times that amount. Alternately, expression of the marker in the patient can be considered "significantly" higher or lower than the normal level of expression if the level of expression is at least about two, and preferably at least about three, four, or five times, higher or lower, respectively, than the normal level of expression of the marker.

Cervical cancer is "inhibited" if at least one symptom of the cancer is alleviated, terminated, slowed, or prevented. As used herein, cervical cancer is also "inhibited" if recurrence or metastasis of the cancer is reduced, slowed, delayed, or prevented.

A kit is any manufacture (e.g. a package or container) comprising at least one reagent, e.g. a probe, for specifically detecting a marker of the invention, the manufacture being promoted, distributed, or sold as a unit for performing the methods of the present invention.

#### Description

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The present invention is based, in part, on identification of novel markers which are expressed at a higher level in cervical cancer cells than they are in normal (i.e. noncancerous) cervical cells. The markers of the invention correspond to nucleic acid and polypeptide molecules which can be detected in one or both of normal and cancerous cervical cells. The presence, absence, or level of expression of one or more of these markers in cervical cells is herein correlated with the cancerous state of the tissue. The 30 invention thus includes compositions, kits, and methods for assessing the cancerous state

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of cervical cells (e.g. cells obtained from a human, cultured human cells, archived or preserved human cells and in vivo cells).

The compositions, kits, and methods of the invention have the following uses, among others:

- 1) assessing whether a patient is afflicted with cervical cancer, including assessing whether the patient has a pre-malignant condition, e.g., CIN and/or SIL;
  - 2) assessing the stage of cervical cancer in a human patient;
  - 3) assessing the grade of cervical cancer in a patient;
  - 4) assessing the benign or malignant nature of cervical cancer in a patient;
- 10 5) assessing the histological type of neoplasm (e.g. squamous cell, small cell, etc.) associated with cervical cancer in a patient;
  - 6) making an isolated hybridoma which produces an antibody useful for assessing whether a patient is afflicted with cervical cancer;
  - 7) assessing the presence of cervical cancer cells;
- 15 8) assessing the efficacy of one or more test compounds for inhibiting cervical cancer in a patient;
  - 9) assessing the efficacy of a therapy for inhibiting cervical cancer in a patient;
  - 10) monitoring the progression of cervical cancer in a patient;
- 20 11) selecting a composition or therapy for inhibiting cervical cancer in a patient;
  - 12) treating a patient afflicted with cervical cancer;
  - 13) inhibiting cervical cancer in a patient;
    - assessing the cervical carcinogenic potential of a test compound;
       and
    - 15) inhibiting cervical cancer in a patient at risk for developing cervical cancer.

The invention thus includes a method of assessing whether a patient is afflicted with cervical cancer which includes assessing whether the patient has a pre-malignant condition. This method comprises comparing the level of expression of a marker in a patient sample and the normal level of expression of the marker in a control, e.g., a non-

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cervical cancer sample. A significant difference between the level of expression of the marker in the patient sample and the normal level is an indication that the patient is afflicted with cervical cancer. The marker is selected from the group consisting of the markers listed within Tables 1-4.

The polynucleotides set forth in Tables 1-4 represent previously unidentified nucleotide sequences. These nucleotide sequences were identified through subtracted library experiments described herein. Also provided by this invention are polynucleotides that correspond to the polynucleotides of Tables 1-4. In one embodiment, these polynucleotides are obtained by identification of a larger fragment or full-length coding sequence of these polynucleotides. Gene delivery vehicles, host cells, compositions and databases (all describe herein) containing these polynucleotides are also provided by this invention.

The invention also encompasses polynucleotides which differ from that of the polynucleotides described above, but which produce the same phenotypic effect, such as an allelic variant. These altered, but phenotypically equivalent polynucleotides are referred to as "equivalent nucleic acids." This invention also encompasses polynucleotides characterized by changes in non-coding regions that do not alter the polypeptide produced therefrom when compared to the polynucleotide herein. This invention further encompasses polynucleotides, which hybridize to the polynucleotides of the subject invention under conditions of moderate or high stringency. Alternatively, the polynucleotides are at least 85%, or at least 90%, or more preferably, greater or equal to 95% identical as determined by a sequence alignment program when run under default parameters.

Any marker or combination of markers listed within Tables 1-4, as well as any known markers in combination with the markers set forth within Tables 1-4, may be used in the compositions, kits, and methods of the present invention. In general, it is preferable to use markers for which the difference between the level of expression of the marker in cervical cancer cells and the level of expression of the same marker in normal cervical cells is as great as possible. Although this difference can be as small as the limit of detection of the method for assessing expression of the marker, it is preferred that the difference be at least greater than the standard error of the assessment method,

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and preferably a difference of at least 2-, 3-, 4-, 5-, 6-, 7-, 8-, 9-, 10-, 15-, 20-, 25-, 100-, 500-, 1000-fold or greater.

It will be appreciated that patient samples containing cervical cells may be used in the methods of the present invention. In these embodiments, the level of expression of the marker can be assessed by assessing the amount (e.g. absolute amount or concentration) of the marker in a cervical cell sample, e.g., cervical smear, obtained from a patient. The cell sample can, of course, be subjected to a variety of well-known post-collection preparative and storage techniques (e.g. storage, freezing, ultrafiltration, concentration, evaporation, centrifugation, etc.) prior to assessing the amount of the marker in the sample. Likewise cervical smears may also be subjected to post-collection preparative and storage techniques, e.g., fixation.

It will also be appreciated that certain markers correspond to proteins or fragments thereof, which are secreted from cervical cells (*i.e.* one or both of normal and cancerous cells) to the extracellular space surrounding the cells. These markers are preferably used in certain embodiments of the compositions, kits, and methods of the invention, owing to the fact that the protein or fragment thereof, corresponding to each of these markers can be detected in a cervical-associated body fluid sample. In addition, preferred *in vivo* techniques for detection of a protein or fragment thereof, corresponding to a marker of the invention include introducing into a subject a labeled antibody directed against the protein or fragment of the protein. For example, the antibody can be labeled with a radioactive marker whose presence and location in a subject can be detected by standard imaging techniques.

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Although not every marker corresponding to a secreted protein is indicated as such herein, it is a simple matter for the skilled artisan to determine whether any particular marker corresponds to a secreted protein. In order to make this determination, the protein corresponding to a marker is expressed in a test cell (e.g. a cell of a cervical cell line), extracellular fluid is collected, and the presence or absence of the protein in the extracellular fluid is assessed (e.g. using a labeled antibody which binds specifically with the protein).

The following is an example of a method which can be used to detect secretion of a protein corresponding to a marker of the invention. About 8 x 10<sup>5</sup> 293T cells are incubated at 37°C in wells containing growth medium (Dulbecco's modified Eagle's medium {DMEM} supplemented with 10% fetal bovine serum) under a 5% (v/v) CO<sub>2</sub>, 95% air atmosphere to about 60-70% confluence. The cells are then transfected using a standard transfection mixture comprising 2 micrograms of DNA comprising an expression vector encoding the protein and 10 microliters of LipofectAMINE<sup>TM</sup> (GIBCO/BRL Catalog no. 18342-012) per well. The transfection mixture is maintained for about 5 hours, and then replaced with fresh growth medium and maintained in an air atmosphere. Each well is gently rinsed twice with DMEM which does not contain methionine or cysteine (DMEM-MC; ICN Catalog no. 16-424-54). About 1 milliliter of DMEM-MC and about 50 microcuries of Trans-35 STM reagent (ICN Catalog no. 51006) are added to each well. The wells are maintained under the 5% CO<sub>2</sub> atmosphere described above and incubated at 37°C for a selected period. Following incubation, 150 microliters of conditioned medium is removed and centrifuged to remove floating cells and debris. The presence of the protein in the supernatant is an indication that the protein is secreted.

Examples of cervical-associated body fluids include blood fluids (e.g. whole blood, blood serum, blood having platelets removed therefrom, etc.), lymph, ascitic fluids, gynecological fluids (e.g. cervix, fallopian, and uterine secretions, menses, vaginal douching fluids, fluids used to rinse cervical cell samples, etc.), cystic fluid, urine, and fluids collected by peritoneal rinsing (e.g. fluids applied and collected during laparoscopy or fluids instilled into and withdrawn from the peritoneal cavity of a human patient).

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Many cervical-associated body fluids can have cervical cells therein, particularly when the cervical cells are cancerous, and, more particularly, when the cervical cancer is metastasizing. Cell-containing fluids which can contain cervical cancer cells include, but are not limited to, peritoneal ascites, fluids collected by peritoneal rinsing, fluids collected by uterine rinsing, uterine fluids such as uterine exudate and menses, pleural fluid, and cervical exudates. Thus, the compositions, kits, and methods of the invention can be used to detect expression of markers corresponding to proteins or fragments thereof, having at least one portion which is displayed on the surface of cells which

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express it. Although the proteins having at least one cell-surface portion are not set forth herein, it is a simple matter for the skilled artisan to determine whether the protein corresponding to any particular marker comprises a cell-surface protein. For example, immunological methods may be used to detect such proteins on whole cells, or well known computer-based sequence analysis methods (e.g. the SIGNALP program; Nielsen et al., 1997, Protein Engineering 10:1-6) may be used to predict the presence of at least one extracellular domain (i.e. including both secreted proteins and proteins having at least one cell-surface domain). Expression of a marker corresponding to a protein or fragment thereof, having at least one portion which is displayed on the surface of a cell which expresses it may be detected without necessarily lysing the cell (e.g. using a labeled antibody which binds specifically with a cell-surface domain of the protein).

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Expression of a marker of the invention may be assessed by any of a wide variety of well known methods for detecting expression of a transcribed molecule or protein. Non-limiting examples of such methods include immunological methods for detection of secreted, cell-surface, cytoplasmic, or nuclear proteins, protein purification methods, protein function or activity assays, nucleic acid hybridization methods, nucleic acid reverse transcription methods, and nucleic acid amplification methods. In situ hybridization (ISH) and immunohistochemistry (IHC) methods are preferred.

In another preferred embodiment, expression of a marker is assessed using an antibody (e.g. a radio-labeled, chromophore-labeled, fluorophore-labeled, or enzymelabeled antibody), an antibody derivative (e.g. an antibody conjugated with a substrate or with the protein or ligand of a protein-ligand pair {e.g. biotin-streptavidin} ), or an antibody fragment (e.g. a single-chain antibody, an isolated antibody hypervariable domain, etc.) which binds specifically with a protein or fragment thereof, corresponding 25 to the marker, such as the protein encoded by the open reading frame corresponding to the marker or such a protein which has undergone all or a portion of its normal posttranslational modification.

In yet another preferred embodiment, expression of a marker is assessed by preparing mRNA/cDNA (i.e. a transcribed polynucleotide) from cells in a patient sample, and by hybridizing the mRNA/cDNA with a reference polynucleotide which is a complement of a polynucleotide comprising the marker, and fragments thereof. cDNA can, optionally, be amplified using any of a variety of polymerase chain reaction

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methods prior to hybridization with the reference polynucleotide. Expression of one or more markers can likewise be detected using quantitative PCR to assess the level of expression of the marker(s). Alternatively, any of the many known methods of detecting mutations or variants (e.g. single nucleotide polymorphisms, deletions, etc.) of a marker of the invention may be used to detect occurrence of a marker in a patient.

In a related embodiment, a mixture of transcribed polynucleotides obtained from the sample is contacted with a substrate having fixed thereto a polynucleotide complementary to or homologous with at least a portion (e.g. at least 7, 10, 15, 20, 25, 30, 40, 50, 100, 500, or more nucleotide residues) of a marker of the invention. If polynucleotides complementary to or homologous with are differentially detectable on the substrate (e.g. detectable using different chromophores or fluorophores, or fixed to different selected positions), then the levels of expression of a plurality of markers can be assessed simultaneously using a single substrate (e.g. a "gene chip" microarray of polynucleotides fixed at selected positions). When a method of assessing marker expression is used which involves hybridization of one nucleic acid with another, it is preferred that the hybridization be performed under stringent hybridization conditions.

Because the compositions, kits, and methods of the invention rely on detection of a difference in expression levels of one or more markers of the invention, it is preferable that the level of expression of the marker is significantly greater than the minimum detection limit of the method used to assess expression in at least one of normal cervical cells and cancerous cervical cells.

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It is understood that by routine screening of additional patient samples using one or more of the markers of the invention, it will be realized that certain of the markers are over- (or under-)expressed in cancers of various types, including specific cervical cancers, as well as other cancers such as ovarian cancer, breast cancer, etc. For example, it will be confirmed that some of the markers of the invention are over-expressed in most (*i.e.* 50% or more) or substantially all (*i.e.* 80% or more) of cervical cancer. Furthermore, it will be confirmed that certain of the markers of the invention are associated with cervical cancer of various stages (*i.e.* stage 0, I, II, III, and IV cervical cancers, as well as subclassifications IA1, IA2, IB, IB1, IB2, IIA, IIB, IIIA, IIIB, IVA, and IVB, using the FIGO Stage Grouping system for primary carcinoma of the cervix (see Gynecologic Oncology, 1991, 41:199 and Cancer, 1992, 69:482)), of various

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histologic subtypes (e.g. squamous cell carcinomas and squamous cell carcinoma variants such as verrucous carcinoma, lymphoepithelioma-like carcinoma, papillary squamous neoplasm and spindle cell squamous cell carcinoma (see Cervical Cancer and Preinvasive Neoplasia, 1996, pp. 90-91), serous, mucinous, endometroid, and clear cell subtypes, as well as subclassifications and alternate classifications adenocarcinoma, papillary adenocarcinoma, papillary cystadenocarcinoma, surface papillary carcinoma, malignant adenofibroma, cystadenofibroma, adenocarcinoma, cystadenocarcinoma, adenoacanthoma, endometrioid stromal sarcoma, mesodermal {Müllerian} mixed tumor, malignant carcinoma, Brenner tumor, mixed epithelial tumor, and undifferentiated carcinoma, using the WHO/FIGO system for classification of malignant cervical tumors; Scully, Atlas of Tumor Pathology, 3d series, Washington DC), and various grades (i.e. grade I (well differentiated), grade II (moderately well differentiated), and grade III {poorly differentiated from surrounding normal tissue} ). In addition, as a greater number of patient samples are assessed for expression of the markers of the invention and the outcomes of the individual patients from whom the samples were obtained are correlated, it will also be confirmed that altered expression of certain of the markers of the invention are strongly correlated with malignant cancers and that altered expression of other markers of the invention are strongly correlated with benign tumors. The compositions, kits, and methods of the invention are thus useful for characterizing one or more of the stage, grade, histological type, and benign/malignant nature of cervical cancer in patients.

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When the compositions, kits, and methods of the invention are used for characterizing one or more of the stage, grade, histological type, and benign/malignant nature of cervical cancer in a patient, it is preferred that the marker or panel of markers of the invention is selected such that a positive result is obtained in at least about 20%, and preferably at least about 40%, 60%, or 80%, and more preferably in substantially all patients afflicted with a cervical cancer of the corresponding stage, grade, histological type, or benign/malignant nature. Preferably, the marker or panel of markers of the invention is selected such that a positive predictive value (PPV) of greater than about 10% is obtained for the general population (more preferably coupled with an assay specificity greater than 99.5%).

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When a plurality of markers of the invention are used in the compositions, kits, and methods of the invention, the level of expression of each marker in a patient sample can be compared with the normal level of expression of each of the plurality of markers in non-cancerous samples of the same type, either in a single reaction mixture (*i.e.* using reagents, such as different fluorescent probes, for each marker) or in individual reaction mixtures corresponding to one or more of the markers. In one embodiment, a significantly enhanced level of expression of more than one of the plurality of markers in the sample, relative to the corresponding normal levels, is an indication that the patient is afflicted with cervical cancer. When a plurality of markers is used, it is preferred that 2, 3, 4, 5, 8, 10, 12, 15, 20, 30, or 50 or more individual markers be used, wherein fewer markers are preferred.

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In order to maximize the sensitivity of the compositions, kits, and methods of the invention (i.e. by interference attributable to cells of non-cervical origin in a patient sample), it is preferable that the marker of the invention used therein be a marker which has a restricted tissue distribution, e.g., normally not expressed in non-cervical tissue.

Only a small number of markers are known to be associated with cervical cancers (e.g. bcl-2, 15A8 antigen, cdc6, Mcm5, and EGFR). These markers are not, of course, included among the markers of the invention, although they may be used together with one or more markers of the invention in a panel of markers, for example. It is well known that certain types of genes, such as oncogenes, tumor suppressor genes, growth factor-like genes, protease-like genes, and protein kinase-like genes are often involved with development of cancers of various types. Thus, among the markers of the invention, use of those which correspond to proteins which resemble known proteins encoded by known oncogenes and tumor suppressor genes, and those which correspond to proteins which resemble growth factors, proteases, and protein kinases are preferred.

Known oncogenes and tumor suppressor genes include, for example, abl, abr, akt2, apc, bcl2α, bcl2β, bcl3, bcr, brcal, brca2, cbl, ccnd1, cdc42, cdk4, crk-II, csf1r/fms, dbl, dcc, dpc4/smad4, e-cad, e2f1/rbap, egfr/erbb-1, elk1, elk3, eph, erg, ets1, ets2, fer, fgr/src2, fli1/ergb2, fos, fps/fes, fra1, fra2, fyn, hck, hek, her2/erbb-2/neu, her3/erbb-3, her4/erbb-4, hras1, hst2, hstf1, igfbp2, ink4a, ink4b, int2/fgf3, jun, junb, jund, kip2, kit, kras2a, kras2b, lck, lyn, mas, max, mcc, mdm2, met, mlh1, mmp10, mos, msh2, msh3, msh6, myb, myba, mybb, myc, mycl1, mycn, nf1, nf2, nme2, nras, p53,

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pdgfb, phb, pim1, pms1, pms2, ptc, pten, raf1, rap1a, rb1, rel, rel, ros1, ski, src1, tal1, tgfbr2, tgfb3, tgfbr3, thra1, thrb, tiam1, timp3, tjp1, tp53, trk, vav, vhl, vil2, waf1, wnt1, wnt2, wt1, and yes1 (Hesketh, 1997, In: The Oncogene and Tumour Suppressor Gene Facts Book, 2nd Ed., Academic Press; Fishel et al., 1994, Science 266:1403-1405).

Known growth factors include platelet-derived growth factor alpha, plateletderived growth factor beta (simian sarcoma viral {v-sis} oncogene homolog), thrombopoietin (myeloproliferative leukemia virus oncogene ligand, megakaryocyte growth and development factor), erythropoietin, B cell growth factor, macrophage stimulating factor 1 (hepatocyte growth factor-like protein), hepatocyte growth factor (hepapoietin A), insulin-like growth factor 1 (somatomedia C), hepatoma-derived growth factor, amphiregulin (schwannoma-derived growth factor), bone morphogenetic proteins 1, 2, 3, 3 beta, and 4, bone morphogenetic protein 7 (osteogenic protein 1), bone morphogenetic protein 8 (osteogenic protein 2), connective tissue growth factor, connective tissue activation peptide 3, epidermal growth factor (EGF), teratocarcinomaderived growth factor 1, endothelin, endothelin 2, endothelin 3, stromal cell-derived factor 1, vascular endothelial growth factor (VEGF), VEGF-B, VEGF-C, placental growth factor (vascular endothelial growth factor-related protein), transforming growth factor alpha, transforming growth factor beta 1 and its precursors, transforming growth factor beta 2 and its precursors, fibroblast growth factor 1 (acidic), fibroblast growth factor 2 (basic), fibroblast growth factor 5 and its precursors, fibroblast growth factor 6 and its precursors, fibroblast growth factor 7 (keratinocyte growth factor), fibroblast growth factor 8 (androgen-induced), fibroblast growth factor 9 (glia-activating factor), pleiotrophin (heparin binding growth factor 8, neurite growth-promoting factor 1), brain-derived neurotrophic factor, and recombinant glial growth factor 2.

Known proteases include interleukin-1 beta convertase and its precursors, Mch6 and its precursors, Mch2 isoform alpha, Mch4, Cpp32 isoform alpha, Lice2 gamma cysteine protease, Ich-1S, Ich-1L, Ich-2 and its precursors, TY protease, matrix metalloproteinase 1 (interstitial collagenase), matrix metalloproteinase 2 (gelatinase A, 72kD gelatinase, 72kD type IV collagenase), matrix metalloproteinase 7 (matrilysin), matrix metalloproteinase 8 (neutrophil collagenase), matrix metalloproteinase 12 (macrophage elastase), matrix metalloproteinase 13 (collagenase 3), metallopeptidase 1, cysteine-rich metalloprotease (disintegrin) and its precursors, subtilisin-like protease Pc8

and its precursors, chymotrypsin, snake venom-like protease, cathepsin I, cathepsin D (lysosomal aspartyl protease), stromelysin, aminopeptidase N, plasminogen, tissue plasminogen activator, plasminogen activator inhibitor type II, and urokinase-type plasminogen activator.

5 Known protein kinases include DAP kinase, serine/threonine protein kinases NIK, PK428, Krs-2, SAK, and EMK, interferon-inducible double stranded RNA dependent protein kinase, FAST kinase, AIM1, IPL1-like midbody-associated protein kinase-1, NIMA-like protein kinase 1 (NLK1), the cyclin-dependent kinases (cdk1-10), checkpoint kinase Chk1, Nek3 protein kinase, BMK1 beta kinase, Clk1, Clk2, Clk3, extracellular signal-regulated kinases 1, 3, and 6, cdc28 protein kinase 1, cdc28 protein kinase 2, pLK, Myt1, c-Jun N-terminal kinase 2, Cam kinase 1, the MAP kinases, insulin-stimulated protein kinase 1, beta-adrenergic receptor kinase 2, ribosomal protein S6 kinase, kinase suppressor of ras-1 (KSR1), putative serine/threonine protein kinase Prk, PkB kinase, cAMP-dependent protein kinase, cGMP-dependent protein kinase, type II cGMP-dependent protein kinase, protein kinases Dyrk2, Dyrk3, and Dyrk4, Rho-15 associated coiled-coil containing protein kinase p160ROCK, protein tyrosine kinase t-Ror1, Ste20-related kinases, cell adhesion kinase beta, protein kinase 3, stress-activated protein kinase 4, protein kinase Zpk, serine kinase hPAK65, dual specificity mitogenactivated protein kinases 1 and 2, casein kinase I gamma 2, p21-activated protein kinase Pak1, lipid-activated protein kinase PRK2, focal adhesion kinase, dual-specificity tyrosine-phosphorylation regulated kinase, myosin light chain kinase, serine kinases SRPK2, TESK1, and VRK2, B lymphocyte serine/threonine protein kinase, stressactivated protein kinases JNK1 and JNK2, phosphorylase kinase, protein tyrosine kinase Tec, Jak2 kinase, protein kinase Ndr, MEK kinase 3, SHB adaptor protein (a Src homology 2 protein), agammaglobulinaemia protein-tyrosine kinase (Atk), protein kinase ATR, guanylate kinase 1, thrombopoeitin receptor and its precursors, DAG kinase epsilon, and kinases encoded by oncogenes or viral oncogenes such as v-fgr (Gardner-Rasheed), v-abl (Abelson murine leukemia viral oncogene homolog 1), v-arg (Abelson murine leukemia viral oncogene homolog, Abelson-related gene), v-fes and vfps (feline sarcoma viral oncogene and Fujinami avian sarcoma viral oncogene homologs), proto-oncogene c-cot, oncogene pim-1, and oncogene mas1.

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It is recognized that the compositions, kits, and methods of the invention will be of particular utility to patients having an enhanced risk of developing cervical cancer and their medical advisors. Patients recognized as having an enhanced risk of developing cervical cancer include, for example, patients having a familial history of cervical cancer, patients identified as having a mutant oncogene (*i.e.* at least one allele), and patients determined through any other established medical criteria to be at risk for cancer or other malignancy.

The level of expression of a marker in normal (i.e. non-cancerous) human cervical tissue can be assessed in a variety of ways. In one embodiment, this normal level of expression is assessed by assessing the level of expression of the marker in a portion of cervical cells which appears to be non-cancerous and by comparing this normal level of expression with the level of expression in a portion of the cervical cells which is suspected of being cancerous. For example, the normal level of expression of a marker may be assessed using a non-affected portion of the cervix and this normal level of expression may be compared with the level of expression of the same marker in an affected portion of the cervix. Alternately, and particularly as further information becomes available as a result of routine performance of the methods described herein, population-average values for normal expression of the markers of the invention may be used. In other embodiments, the 'normal' level of expression of a marker may be determined by assessing expression of the marker in a patient sample obtained from a non-cancer-afflicted patient, from a patient sample obtained from a patient before the suspected onset of cervical cancer in the patient, from archived patient samples, and the like.

The invention includes compositions, kits, and methods for assessing the presence of cervical cancer cells in a sample (e.g. an archived tissue sample or a sample obtained from a patient). These compositions, kits, and methods are substantially the same as those described above, except that, where necessary, the compositions, kits, and methods are adapted for use with samples other than patient samples. For example, when the sample to be used is a parafinized, archived human tissue sample, it can be necessary to adjust the ratio of compounds in the compositions of the invention, in the kits of the invention, or the methods used to assess levels of marker expression in the

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sample. Such methods are well known in the art and within the skill of the ordinary artisan.

The invention includes a kit for assessing the presence of cervical cancer cells (e.g. in a sample such as a patient sample). The kit comprises a plurality of reagents, each of which is capable of binding specifically with a nucleic acid or polypeptide corresponding to a marker of the invention. Suitable reagents for binding with a polypeptide corresponding to a marker of the invention include antibodies, antibody derivatives, antibody fragments, and the like. Suitable reagents for binding with a nucleic acid (e.g. a genomic DNA, an mRNA, a spliced mRNA, a cDNA, or the like) include complementary nucleic acids. For example, the nucleic acid reagents may include oligonucleotides (labeled or non-labeled) fixed to a substrate, labeled oligonucleotides not bound with a substrate, pairs of PCR primers, molecular beacon probes, and the like.

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The kit of the invention may optionally comprise additional components useful for performing the methods of the invention. By way of example, the kit may comprise fluids (e.g. SSC buffer) suitable for annealing complementary nucleic acids or for binding an antibody with a protein with which it specifically binds, one or more sample compartments, an instructional material which describes performance of a method of the invention, a sample of normal cervical cells, a sample of cervical cancer cells, and the like.

The invention also includes a method of making an isolated hybridoma which produces an antibody useful for assessing whether a patient is afflicted with cervical cancer. In this method, a protein corresponding to a marker of the invention is isolated (e.g. by purification from a cell in which it is expressed or by transcription and translation of a nucleic acid encoding the protein in vivo or in vitro using known methods). A vertebrate, preferably a mammal such as a mouse, rat, rabbit, or sheep, is immunized using the isolated protein or protein fragment. The vertebrate may optionally (and preferably) be immunized at least one additional time with the isolated protein or protein fragment, so that the vertebrate exhibits a robust immune response to the protein or protein fragment. Splenocytes are isolated from the immunized vertebrate and fused with an immortalized cell line to form hybridomas, using any of a variety of methods well known in the art. Hybridomas formed in this manner are then screened

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using standard methods to identify one or more hybridomas which produce an antibody which specifically binds with the protein or protein fragment. The invention also includes hybridomas made by this method and antibodies made using such hybridomas.

The invention also includes a method of assessing the efficacy of a test compound for inhibiting cervical cancer cells. As described above, differences in the level of expression of the markers of the invention correlate with the cancerous state of cervical cells. Although it is recognized that changes in the levels of expression of certain of the markers of the invention likely result from the cancerous state of cervical cells, it is likewise recognized that changes in the levels of expression of other of the markers of the invention induce, maintain, and promote the cancerous state of those cells. Thus, compounds which inhibit cervical cancer in a patient will cause the level of expression of one or more of the markers of the invention to change to a level nearer the normal level of expression for that marker (*i.e.* the level of expression for the marker in non-cancerous cervical cells).

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This method thus comprises comparing expression of a marker in a first cervical cell sample and maintained in the presence of the test compound and expression of the marker in a second cervical cell sample and maintained in the absence of the test compound. A significant decrease in the level of expression of a marker listed within Tables 1-4 is an indication that the test compound inhibits cervical cancer. The cervical cell samples may, for example, be aliquots of a single sample of normal cervical cells obtained from a patient, pooled samples of normal cervical cells obtained from a patient, cells of a normal cervical cell line, aliquots of a single sample of cervical cancer cells obtained from a patient, pooled samples of cervical cancer cells obtained from a patient, cells of a cervical cancer cell line, or the like. In one embodiment, the samples are cervical cancer cells obtained from a patient and a plurality of compounds known to be effective for inhibiting various cervical cancers are tested in order to identify the compound which is likely to best inhibit the cervical cancer in the patient.

This method may likewise be used to assess the efficacy of a therapy for inhibiting cervical cancer in a patient. In this method, the level of expression of one or more markers of the invention in a pair of samples (one subjected to the therapy, the other not subjected to the therapy) is assessed. As with the method of assessing the efficacy of test compounds, if the therapy induces a significant decrease in the level of

expression of a marker listed within Tables 1-4, or blocks induction of a marker listed within Tables 1-4, then the therapy is efficacious for inhibiting cervical cancer. As above, if samples from a selected patient are used in this method, then alternative therapies can be assessed *in vitro* in order to select a therapy most likely to be efficacious for inhibiting cervical cancer in the patient.

As described herein, cervical cancer in patients is associated with an increase in the level of expression of one or more markers listed within Tables 1-4. While, as discussed above, some of these changes in expression level result from occurrence of the cervical cancer, others of these changes induce, maintain, and promote the cancerous state of cervical cancer cells. Thus, cervical cancer characterized by an increase in the level of expression of one or more markers listed within Tables 1-4 can be controlled or suppressed by inhibiting expression of those markers.

Expression of a marker listed within Tables 1-4 can be inhibited in a number of ways generally known in the art. For example, an antisense oligonucleotide can be provided to the cervical cancer cells in order to inhibit transcription, translation, or both, of the marker(s). Alternately, a polynucleotide encoding an antibody, an antibody derivative, or an antibody fragment, and operably linked with an appropriate promoter/regulator region, can be provided to the cell in order to generate intracellular antibodies which will inhibit the function or activity of the protein corresponding to the marker(s). Using the methods described herein, a variety of molecules, particularly including molecules sufficiently small that they are able to cross the cell membrane, can be screened in order to identify molecules which inhibit expression of the marker(s). The compound so identified can be provided to the patient in order to inhibit expression of the marker(s) in the cervical cancer cells of the patient.

As described above, the cancerous state of human cervical cells is correlated with changes in the levels of expression of the markers of the invention. Thus, compounds which induce increased expression of one or more of the markers listed within Tables 1-4 can induce cervical cell carcinogenesis. The invention thus includes a method for assessing the human cervical cell carcinogenic potential of a test compound. This method comprises maintaining separate aliquots of human cervical cells in the presence and absence of the test compound. Expression of a marker of the invention in each of the aliquots is compared. A significant increase in the level of expression of a

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marker listed within Tables 1-4 in the aliquot maintained in the presence of the test compound (relative to the aliquot maintained in the absence of the test compound) is an indication that the test compound possesses human cervical cell carcinogenic potential. The relative carcinogenic potentials of various test compounds can be assessed by comparing the degree of enhancement or inhibition of the level of expression of the relevant markers, by comparing the number of markers for which the level of expression is enhanced or inhibited, or by comparing both.

Various aspects of the invention are described in further detail in the following subsections.

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#### I. Isolated Nucleic Acid Molecules

One aspect of the invention pertains to novel isolated nucleic acid molecules that correspond to a marker of the invention, including nucleic acids which encode a polypeptide corresponding to a marker of the invention or a portion of such a polypeptide. Isolated nucleic acids of the invention also include nucleic acid molecules sufficient for use as hybridization probes to identify nucleic acid molecules that correspond to a marker of the invention, including nucleic acids which encode a polypeptide corresponding to a marker of the invention, and fragments of such nucleic acid molecules, e.g., those suitable for use as PCR primers for the amplification or mutation of nucleic acid molecules. As used herein, the term "nucleic acid molecule" is intended to include DNA molecules (e.g., cDNA or genomic DNA) and RNA molecules (e.g., mRNA) and analogs of the DNA or RNA generated using nucleotide analogs. The nucleic acid molecule can be single-stranded or double-stranded, but preferably is double-stranded DNA.

An "isolated" nucleic acid molecule is one which is separated from other nucleic acid molecules which are present in the natural source of the nucleic acid molecule. Preferably, an "isolated" nucleic acid molecule is free of sequences (preferably protein-encoding sequences) which naturally flank the nucleic acid (*i.e.*, sequences located at the 5' and 3' ends of the nucleic acid) in the genomic DNA of the organism from which the nucleic acid is derived. For example, in various embodiments, the isolated nucleic acid molecule can contain less than about 5 kB, 4 kB, 3 kB, 2 kB, 1 kB, 0.5 kB or 0.1 kB of nucleotide sequences which naturally flank the nucleic acid molecule in genomic DNA

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of the cell from which the nucleic acid is derived. Moreover, an "isolated" nucleic acid molecule, such as a cDNA molecule, can be substantially free of other cellular material, or culture medium when produced by recombinant techniques, or substantially free of chemical precursors or other chemicals when chemically synthesized.

A nucleic acid molecule of the present invention, e.g., a nucleic acid encoding a protein corresponding to a marker listed in Tables 1-4, can be isolated using standard molecular biology techniques and the sequence information described herein. Using all or a portion of such nucleic acid sequences, nucleic acid molecules of the invention can be isolated using standard hybridization and cloning techniques (e.g., as described in Sambrook et al., ed., Molecular Cloning: A Laboratory Manual, 2nd ed., Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY, 1989).

A process for identifying a larger fragment or the full-length coding sequence of a marker of the present invention is thus also provided. Any conventional recombinant DNA techniques applicable for isolating polynucleotides may be employed. One such method involves the 5'-RACE-PCR technique, in which the poly-A mRNA that contains the coding sequence of particular interest is first reverse transcribed with a 3'-primer comprising a sequence disclosed herein. The newly synthesized cDNA strand is then tagged with an anchor primer with a known sequence, which preferably contains a convenient cloning restriction site attached at the 5'end. The tagged cDNA is then amplified with the 3'-primer (or a nested primer sharing sequence homology to the internal sequences of the coding region) and the 5'-anchor primer. The amplification may be conducted under conditions of various levels of stringency to optimize the amplification specificity. 5'-RACE-PCR can be readily performed using commercial kits (available from, e.g., BRL Life Technologies Inc., Clotech) according to the manufacturer's instructions.

Isolating the complete coding sequence of a gene can also be carried out in a hybridization assay using a suitable probe. The probe preferably comprises at least 10 nucleotides, and more preferably exhibits sequence homology to the polynucleotides of the markers of the present invention. Other high throughput screens for cDNAs, such as those involving gene chip technology, can also be employed in obtaining the complete cDNA sequence.

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In addition, databases exist that reduce the complexity of ESTs by assembling contiguous EST sequences into tentative genes. For example, TIGR has assembled human ESTs into a database called THC for tentative human consensus sequences. The THC database allows for a more definitive assignment compared to ESTs alone. Software programs exist (TIGR assembler and TIGEM EST assembly machine and contig assembly program (see Huang, X., 1996, *Genomes* 33:21-23)) that allow for assembling ESTs into contiguous sequences from any organism.

Alternatively, mRNA from a sample preparation is used to construct cDNA library in the ZAP Express vector following the procedure described in Velculescu *et al.*, 1997, *Science* 270:484. The ZAP Express cDNA synthesis kit (Stratagene) is used accordingly to the manufacturer's protocol. Plates containing 250 to 2000 plaques are hybridized as described in Rupert *et al.*, 1988, *Mol. Cell. Bio.* 8:3104 to oligonucleotide probes with the same conditions previously described for standard probes except that the hybridization temperature is reduced to a room temperature. Washes are performed in 6X standard-saline-citrate 0.1% SDS for 30 minutes at room temperature. The probes are labeled with <sup>32</sup>P-ATP trough use of T4 polynucleotide kinase.

A partial cDNA (3' fragment) can be isolated by 3' directed PCR reaction. This procedure is a modification of the protocol described in Polyak *et al.*, 1997, *Nature* 389:300. Briefly, the procedure uses SAGE tags in PCR reaction such that the resultant PCR product contains the SAGE tag of interest as well as additional cDNA, the length of which is defined by the position of the tag with respect to the 3' end of the cDNA. The cDNA product derived from such a transcript driven PCR reaction can be used for many applications.

RNA from a source to express the cDNA corresponding to a given tag is first converted to double-stranded cDNA using any standard cDNA protocol. Similar conditions used to generate cDNA for SAGE library construction can be employed except that a modified oligo-dT primer is used to derive the first strand synthesis. For example, the oligonucleotide of composition 5'-B-TCC GGC GCG CCG TTT TCC CAG TCA CGA(30)-3', contains a poly-T stretch at the 3' end for hybridization and priming from poly-A tails, an M13 priming site for use in subsequent PCR steps, a 5' Biotin label (B) for capture to strepavidin-coated magnetic beads, and an AscI restriction endonuclease site for releasing the cDNA from the strepavidin-coated magnetic beads.

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Theoretically, any sufficiently-sized DNA region capable of hybridizing to a PCR primer can be used as well as any other 8 base pair recognizing endonuclease.

cDNA constructed utilizing this or similar modified oligo-dT primer is then processed as described in U.S. Patent No. 5,695,937 up until adapter ligation where only one adapter is ligated to the cDNA pool. After adapter ligation, the cDNA is released from the streptavidin-coated magnetic beads and is then used as a template for cDNA amplification.

Various PCR protocols can be employed using PCR priming sites within the 3' modified oligo-dT primer and the SAGE tag. The SAGE tag-derived PCR primer employed can be of varying length dictated by 5' extension of the tag into the adaptor sequence. cDNA products are now available for a variety of applications.

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This technique can be further modified by: (1) altering the length and/or content of the modified oligo-dT primer; (2) ligating adaptors other than that previously employed within the SAGE protocol; (3) performing PCR from template retained on the streptavidin-coated magnetic beads; and (4) priming first strand cDNA synthesis with non-oligo-dT based primers.

Gene trapper technology can also be used. The reagents and manufacturer's instructions for this technology are commercially available from Life Technologies, Inc., Gaithsburg, Maryland. Briefly, a complex population of single-stranded phagemid DNA containing directional cDNA inserts is enriched for the target sequence by hybridization in solution to a biotinylated oligonucleotide probe complementary to the target sequence. The hybrids are captured on streptavidin-coated paramagnetic beads. A magnet retrieves the paramagnetic beads from the solution, leaving nonhybridized single-stranded DNAs behind. Subsequently, the captured single-stranded DNA target is released from the biotinylated oligonucleotide. After release, the cDNA clone is further enriched by using a nonbiotinylated target oligonucleotide to specifically prime conversion of the single-stranded DNA. Following transformation and plating, typically 20% to 100% of the colonies represent the cDNA clone of interest. To identify the desired cDNA clone, the colonies may be screened by colony hybridization using the <sup>32</sup>P-labeled oligonucleotide, or alternatively by DNA sequencing and alignment of all sequences obtained from numerous clones to determine a consensus sequence.

A nucleic acid molecule of the invention can be amplified using cDNA, mRNA, or genomic DNA as a template and appropriate oligonucleotide primers according to standard PCR amplification techniques. The nucleic acid so amplified can be cloned into an appropriate vector and characterized by DNA sequence analysis. Furthermore, oligonucleotides corresponding to all or a portion of a nucleic acid molecule of the invention can be prepared by standard synthetic techniques, *e.g.*, using an automated DNA synthesizer.

In another preferred embodiment, an isolated nucleic acid molecule of the invention comprises a nucleic acid molecule which has a nucleotide sequence complementary to the nucleotide sequence of a nucleic acid corresponding to a marker of the invention or to the nucleotide sequence of a nucleic acid encoding a protein which corresponds to a marker of the invention. A nucleic acid molecule which is complementary to a given nucleotide sequence is one which is sufficiently complementary to the given nucleotide sequence that it can hybridize to the given nucleotide sequence thereby forming a stable duplex.

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Moreover, a nucleic acid molecule of the invention can comprise only a portion of a nucleic acid sequence, wherein the full length nucleic acid sequence comprises a marker of the invention or which encodes a polypeptide corresponding to a marker of the invention. Such nucleic acids can be used, for example, as a probe or primer. The probe/primer typically is used as one or more substantially purified oligonucleotides. The oligonucleotide typically comprises a region of nucleotide sequence that hybridizes under stringent conditions to at least about 7, preferably about 15, more preferably about 25, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, or 400 or more consecutive nucleotides of a nucleic acid of the invention.

Probes based on the sequence of a nucleic acid molecule of the invention can be used to detect transcripts or genomic sequences corresponding to one or more markers of the invention. The probe comprises a label group attached thereto, e.g., a radioisotope, a fluorescent compound, an enzyme, or an enzyme co-factor. Such probes can be used as part of a diagnostic test kit for identifying cells or tissues which misexpress the protein, such as by measuring levels of a nucleic acid molecule encoding the protein in a sample of cells from a subject, e.g., detecting mRNA levels or determining whether a gene encoding the protein has been mutated or deleted.

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The invention further encompasses nucleic acid molecules that differ, due to degeneracy of the genetic code, from the nucleotide sequence of nucleic acids encoding a protein which corresponds to a marker of the invention, and thus encode the same protein.

In addition to the nucleotide sequences described in the Tables, it will be appreciated by those skilled in the art that DNA sequence polymorphisms that lead to changes in the amino acid sequence can exist within a population (e.g., the human population). Such genetic polymorphisms can exist among individuals within a population due to natural allelic variation. An allele is one of a group of genes which occur alternatively at a given genetic locus. In addition, it will be appreciated that DNA polymorphisms that affect RNA expression levels can also exist that may affect the overall expression level of that gene (e.g., by affecting regulation or degradation).

As used herein, the phrase "allelic variant" refers to a nucleotide sequence which occurs at a given locus or to a polypeptide encoded by the nucleotide sequence.

As used herein, the terms "gene" and "recombinant gene" refer to nucleic acid molecules comprising an open reading frame encoding a polypeptide corresponding to a marker of the invention. Such natural allelic variations can typically result in 0.1-0.5% variance in the nucleotide sequence of a given gene. Alternative alleles can be identified by sequencing the gene of interest in a number of different individuals. This can be readily carried out by using hybridization probes to identify the same genetic locus in a variety of individuals. Any and all such nucleotide variations and resulting amino acid polymorphisms or variations that are the result of natural allelic variation and that do not alter the functional activity are intended to be within the scope of the invention.

In another embodiment, an isolated nucleic acid molecule of the invention is at least 7, 15, 20, 25, 30, 40, 60, 80, 100, 150, 200, 250, 300, 350, 400, 450, 550, 650, 700, 800, 900, 1000, 1200, 1400, 1600, 1800, 2000, 2200, 2400, 2600, 2800, 3000, 3500, 4000, 4500, or more nucleotides in length and hybridizes under stringent conditions to a nucleic acid corresponding to a marker of the invention or to a nucleic acid encoding a protein corresponding to a marker of the invention. As used herein, the term "hybridizes under stringent conditions" is intended to describe conditions for hybridization and washing under which nucleotide sequences at least 75% (80%, 85%, preferably 90%) identical to each other typically remain hybridized to each other. Such stringent

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conditions are known to those skilled in the art and can be found in sections 6.3.1-6.3.6 of *Current Protocols in Molecular Biology*, John Wiley & Sons, N.Y. (1989). A preferred, non-limiting example of stringent hybridization conditions for annealing two single-stranded DNA each of which is at least about 100 bases in length and/or for annealing a single-stranded DNA and a single-stranded RNA each of which is at least about 100 bases in length, are hybridization in 6X sodium chloride/sodium citrate (SSC) at about 45°C, followed by one or more washes in 0.2X SSC, 0.1% SDS at 50-65°C. Further preferred hybridization conditions are taught in Lockhart, *et al.*, Nature Biotechnology, Volume 14, 1996 August:1675-1680; Breslauer, *et al.*, Proc. Natl. Acad. Sci. USA, Volume 83, 1986 June: 3746-3750; Van Ness, *et al.*, Nucleic Acids Research, Volume 19, No. 19, 1991 September: 5143-5151; McGraw, *et al.*, BioTechniques, Volume 8, No. 6 1990: 674-678; and Milner, *et al.*, Nature Biotechnology, Volume 15, 1997 June: 537-541, all expressly incorporated by reference.

In addition to naturally-occurring allelic variants of a nucleic acid molecule of the invention that can exist in the population, the skilled artisan will further appreciate that sequence changes can be introduced by mutation thereby leading to changes in the amino acid sequence of the encoded protein, without altering the biological activity of the protein encoded thereby. For example, one can make nucleotide substitutions leading to amino acid substitutions at "non-essential" amino acid residues. A "non-essential" amino acid residue is a residue that can be altered from the wild-type sequence without altering the biological activity, whereas an "essential" amino acid residue is required for biological activity. For example, amino acid residues that are not conserved or only semi-conserved among homologs of various species may be non-essential for activity and thus would be likely targets for alteration. Alternatively, amino acid residues that are conserved among the homologs of various species (e.g., murine and human) may be essential for activity and thus would not be likely targets for alteration.

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Accordingly, another aspect of the invention pertains to nucleic acid molecules encoding a polypeptide of the invention that contain changes in amino acid residues that are not essential for activity. Such polypeptides differ in amino acid sequence from the naturally-occurring proteins which correspond to the markers of the invention, yet retain biological activity. In one embodiment, such a protein has an amino acid sequence that

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is at least about 40% identical, 50%, 60%, 70%, 80%, 90%, 95%, or 98% identical to the amino acid sequence of one of the proteins which correspond to the markers of the invention.

An isolated nucleic acid molecule encoding a variant protein can be created by introducing one or more nucleotide substitutions, additions or deletions into the nucleotide sequence of nucleic acids of the invention, such that one or more amino acid residue substitutions, additions, or deletions are introduced into the encoded protein. Mutations can be introduced by standard techniques, such as site-directed mutagenesis and PCR-mediated mutagenesis. Preferably, conservative amino acid substitutions are made at one or more predicted non-essential amino acid residues. A "conservative amino acid substitution" is one in which the amino acid residue is replaced with an amino acid residue having a similar side chain. Families of amino acid residues having similar side chains have been defined in the art. These families include amino acids with basic side chains (e.g., lysine, arginine, histidine), acidic side chains (e.g., aspartic acid, glutamic acid), uncharged polar side chains (e.g., glycine, asparagine, glutamine, serine, threonine, tyrosine, cysteine), non-polar side chains (e.g., alanine, valine, leucine, isoleucine, proline, phenylalanine, methionine, tryptophan), beta-branched side chains (e.g., threonine, valine, isoleucine) and aromatic side chains (e.g., tyrosine, phenylalanine, tryptophan, histidine). Alternatively, mutations can be introduced randomly along all or part of the coding sequence, such as by saturation mutagenesis, and the resultant mutants can be screened for biological activity to identify mutants that retain activity. Following mutagenesis, the encoded protein can be expressed recombinantly and the activity of the protein can be determined.

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The present invention encompasses antisense nucleic acid molecules, *i.e.*, molecules which are complementary to a sense nucleic acid of the invention, *e.g.*, complementary to the coding strand of a double-stranded cDNA molecule corresponding to a marker of the invention or complementary to an mRNA sequence corresponding to a marker of the invention. Accordingly, an antisense nucleic acid of the invention can hydrogen bond to (*i.e.* anneal with) a sense nucleic acid of the invention. The antisense nucleic acid can be complementary to an entire coding strand, or to only a portion thereof, *e.g.*, all or part of the protein coding region (or open reading frame). An antisense nucleic acid molecule can also be antisense to all or part of a non-

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coding region of the coding strand of a nucleotide sequence encoding a polypeptide of the invention. The non-coding regions ("5' and 3' untranslated regions") are the 5' and 3' sequences which flank the coding region and are not translated into amino acids.

An antisense oligonucleotide can be, for example, about 5, 10, 15, 20, 25, 30, 35, 40, 45, or 50 or more nucleotides in length. An antisense nucleic acid of the invention can be constructed using chemical synthesis and enzymatic ligation reactions using procedures known in the art. For example, an antisense nucleic acid (e.g., an antisense oligonucleotide) can be chemically synthesized using naturally occurring nucleotides or variously modified nucleotides designed to increase the biological stability of the molecules or to increase the physical stability of the duplex formed between the 10 antisense and sense nucleic acids, e.g., phosphorothioate derivatives and acridine substituted nucleotides can be used. Examples of modified nucleotides which can be used to generate the antisense nucleic acid include 5-fluorouracil, 5-bromouracil, 5chlorouracil, 5-iodouracil, hypoxanthine, xanthine, 4-acetylcytosine, 5-(carboxyhydroxylmethyl) uracil, 5-carboxymethylaminomethyl-2-thiouridine, 5carboxymethylaminomethyluracil, dihydrouracil, beta-D-galactosylqueosine, inosine, N6-isopentenyladenine, 1-methylguanine, 1-methylinosine, 2,2-dimethylguanine, 2methyladenine, 2-methylguanine, 3-methylcytosine, 5-methylcytosine, N6-adenine, 7methylguanine, 5-methylaminomethyluracil, 5-methoxyaminomethyl-2-thiouracil, beta-D-mannosylqueosine, 5'-methoxycarboxymethyluracil, 5-methoxyuracil, 2-methylthio-N6-isopentenyladenine, uracil-5-oxyacetic acid (v), wybutoxosine, pseudouracil, queosine, 2-thiocytosine, 5-methyl-2-thiouracil, 2-thiouracil, 4-thiouracil, 5methyluracil, uracil-5-oxyacetic acid methylester, uracil-5-oxyacetic acid (v), 5-methyl-2-thiouracil, 3-(3-amino-3-N-2-carboxypropyl) uracil, (acp3)w, and 2,6-diaminopurine. Alternatively, the antisense nucleic acid can be produced biologically using an expression vector into which a nucleic acid has been sub-cloned in an antisense orientation (i.e., RNA transcribed from the inserted nucleic acid will be of an antisense orientation to a target nucleic acid of interest, described further in the following subsection).

The antisense nucleic acid molecules of the invention are typically administered to a subject or generated in situ such that they hybridize with or bind to cellular mRNA and/or genomic DNA encoding a polypeptide corresponding to a selected marker of the

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invention to thereby inhibit expression of the marker, e.g., by inhibiting transcription and/or translation. The hybridization can be by conventional nucleotide complementarity to form a stable duplex, or, for example, in the case of an antisense nucleic acid molecule which binds to DNA duplexes, through specific interactions in the major groove of the double helix. Examples of a route of administration of antisense nucleic acid molecules of the invention includes direct injection at a tissue site or infusion of the antisense nucleic acid into a cervix-associated body fluid. Alternatively, antisense nucleic acid molecules can be modified to target selected cells and then administered systemically. For example, for systemic administration, antisense molecules can be modified such that they specifically bind to receptors or antigens expressed on a selected cell surface, e.g., by linking the antisense nucleic acid molecules to peptides or antibodies which bind to cell surface receptors or antigens. The antisense nucleic acid molecules can also be delivered to cells using the vectors described herein. To achieve sufficient intracellular concentrations of the antisense molecules, vector constructs in which the antisense nucleic acid molecule is placed under the control of a strong pol II or pol III promoter are preferred.

An antisense nucleic acid molecule of the invention can be an α-anomeric nucleic acid molecule. An α-anomeric nucleic acid molecule forms specific double-stranded hybrids with complementary RNA in which, contrary to the usual α-units, the strands run parallel to each other (Gaultier *et al.*, 1987, *Nucleic Acids Res.* 15:6625-6641). The antisense nucleic acid molecule can also comprise a 2'-o-methylribonucleotide (Inoue *et al.*, 1987, *Nucleic Acids Res.* 15:6131-6148) or a chimeric RNA-DNA analogue (Inoue *et al.*, 1987, *FEBS Lett.* 215:327-330).

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The invention also encompasses ribozymes. Ribozymes are catalytic RNA molecules with ribonuclease activity which are capable of cleaving a single-stranded nucleic acid, such as an mRNA, to which they have a complementary region. Thus, ribozymes (e.g., hammerhead ribozymes as described in Haselhoff and Gerlach, 1988, Nature 334:585-591) can be used to catalytically cleave mRNA transcripts to thereby inhibit translation of the protein encoded by the mRNA. A ribozyme having specificity for a nucleic acid molecule encoding a polypeptide corresponding to a marker of the invention can be designed based upon the nucleotide sequence of a CDNA corresponding to the marker. For example, a derivative of a *Tetrahymena* L-19 IVS

RNA can be constructed in which the nucleotide sequence of the active site is complementary to the nucleotide sequence to be cleaved (see Cech *et al.* U.S. Patent No. 4,987,071; and Cech *et al.* U.S. Patent No. 5,116,742). Alternatively, an mRNA encoding a polypeptide of the invention can be used to select a catalytic RNA having a specific ribonuclease activity from a pool of RNA molecules (see, *e.g.*, Bartel and Szostak, 1993, *Science* 261:1411-1418).

The invention also encompasses nucleic acid molecules which form triple helical structures. For example, expression of a polypeptide of the invention can be inhibited by targeting nucleotide sequences complementary to the regulatory region of the gene encoding the polypeptide (e.g., the promoter and/or enhancer) to form triple helical structures that prevent transcription of the gene in target cells. See generally Helene (1991) Anticancer Drug Des. 6(6):569-84; Helene (1992) Ann. N.Y. Acad. Sci. 660:27-36; and Maher (1992) Bioassays 14(12):807-15.

In various embodiments, the nucleic acid molecules of the invention can be
modified at the base moiety, sugar moiety or phosphate backbone to improve, e.g., the
stability, hybridization, or solubility of the molecule. For example, the deoxyribose
phosphate backbone of the nucleic acids can be modified to generate peptide nucleic
acids (see Hyrup et al., 1996, Bioorganic & Medicinal Chemistry 4(1): 5-23). As used
herein, the terms "peptide nucleic acids" or "PNAs" refer to nucleic acid mimics, e.g.,

DNA mimics, in which the deoxyribose phosphate backbone is replaced by a
pseudopeptide backbone and only the four natural nucleobases are retained. The neutral
backbone of PNAs has been shown to allow for specific hybridization to DNA and RNA
under conditions of low ionic strength. The synthesis of PNA oligomers can be
performed using standard solid phase peptide synthesis protocols as described in Hyrup

et al. (1996), supra; Perry-O'Keefe et al. (1996) Proc. Natl. Acad. Sci. USA 93:14670675.

PNAs can be used in therapeutic and diagnostic applications. For example,
PNAs can be used as antisense or antigene agents for sequence-specific modulation of
gene expression by, e.g., inducing transcription or translation arrest or inhibiting
replication. PNAs can also be used, e.g., in the analysis of single base pair mutations in
a gene by, e.g., PNA directed PCR clamping; as artificial restriction enzymes when used
in combination with other enzymes, e.g., S1 nucleases (Hyrup (1996), supra; or as

probes or primers for DNA sequence and hybridization (Hyrup, 1996, *supra*; Perry-O'Keefe *et al.*, 1996, *Proc. Natl. Acad. Sci. USA* 93:14670-675).

In another embodiment, PNAs can be modified, e.g., to enhance their stability or cellular uptake, by attaching lipophilic or other helper groups to PNA, by the formation of PNA-DNA chimeras, or by the use of liposomes or other techniques of drug delivery known in the art. For example, PNA-DNA chimeras can be generated which can combine the advantageous properties of PNA and DNA. Such chimeras allow DNA recognition enzymes, e.g., RNASE H and DNA polymerases, to interact with the DNA portion while the PNA portion would provide high binding affinity and specificity. PNA-DNA chimeras can be linked using linkers of appropriate lengths selected in terms 10 of base stacking, number of bonds between the nucleobases, and orientation (Hyrup, 1996, supra). The synthesis of PNA-DNA chimeras can be performed as described in Hyrup (1996), supra, and Finn et al. (1996) Nucleic Acids Res. 24(17):3357-63. For example, a DNA chain can be synthesized on a solid support using standard phosphoramidite coupling chemistry and modified nucleoside analogs. Compounds 15 such as 5'-(4-methoxytrityl)amino-5'-deoxy-thymidine phosphoramidite can be used as a link between the PNA and the 5' end of DNA (Mag et al., 1989, Nucleic Acids Res. 17:5973-88). PNA monomers are then coupled in a step-wise manner to produce a chimeric molecule with a 5' PNA segment and a 3' DNA segment (Finn et al., 1996, Nucleic Acids Res. 24(17):3357-63). Alternatively, chimeric molecules can be 20 synthesized with a 5' DNA segment and a 3' PNA segment (Peterser et al., 1975, Bioorganic Med. Chem. Lett. 5:1119-11124).

In other embodiments, the oligonucleotide can include other appended groups such as peptides (e.g., for targeting host cell receptors in vivo), or agents facilitating transport across the cell membrane (see, e.g., Letsinger et al., 1989, Proc. Natl. Acad. Sci. USA 86:6553-6556; Lemaitre et al., 1987, Proc. Natl. Acad. Sci. USA 84:648-652; PCT Publication No. WO 88/09810) or the blood-brain barrier (see, e.g., PCT Publication No. WO 89/10134). In addition, oligonucleotides can be modified with hybridization-triggered cleavage agents (see, e.g., Krol et al., 1988, Bio/Techniques 6:958-976) or intercalating agents (see, e.g., Zon, 1988, Pharm. Res. 5:539-549). To this end, the oligonucleotide can be conjugated to another molecule, e.g., a peptide,

hybridization triggered cross-linking agent, transport agent, hybridization-triggered cleavage agent, etc.

The invention also includes molecular beacon nucleic acids having at least one region which is complementary to a nucleic acid of the invention, such that the molecular beacon is useful for quantitating the presence of the nucleic acid of the invention in a sample. A "molecular beacon" nucleic acid is a nucleic acid comprising a pair of complementary regions and having a fluorophore and a fluorescent quencher associated therewith. The fluorophore and quencher are associated with different portions of the nucleic acid in such an orientation that when the complementary regions are annealed with one another, fluorescence of the fluorophore is quenched by the quencher. When the complementary regions of the nucleic acid are not annealed with one another, fluorescence of the fluorophore is quenched to a lesser degree. Molecular beacon nucleic acids are described, for example, in U.S. Patent 5,876,930.

## 15 II. Isolated Proteins and Antibodies

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One aspect of the invention pertains to novel isolated proteins which correspond to individual markers of the invention, and biologically active portions thereof, as well as polypeptide fragments suitable for use as immunogens to raise antibodies directed against a polypeptide corresponding to a marker of the invention. In one embodiment, the native polypeptide corresponding to a marker can be isolated from cells or tissue sources by an appropriate purification scheme using standard protein purification techniques. In another embodiment, polypeptides corresponding to a marker of the invention are produced by recombinant DNA techniques. Alternative to recombinant expression, a polypeptide corresponding to a marker of the invention can be synthesized chemically using standard peptide synthesis techniques.

An "isolated" or "purified" protein or biologically active portion thereof is substantially free of cellular material or other contaminating proteins from the cell or tissue source from which the protein is derived, or substantially free of chemical precursors or other chemicals when chemically synthesized. The language "substantially free of cellular material" includes preparations of protein in which the protein is separated from cellular components of the cells from which it is isolated or recombinantly produced. Thus, protein that is substantially free of cellular material

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includes preparations of protein having less than about 30%, 20%, 10%, or 5% (by dry weight) of heterologous protein (also referred to herein as a "contaminating protein"). When the protein or biologically active portion thereof is recombinantly produced, it is also preferably substantially free of culture medium, *i.e.*, culture medium represents less than about 20%, 10%, or 5% of the volume of the protein preparation. When the protein is produced by chemical synthesis, it is preferably substantially free of chemical precursors or other chemicals, *i.e.*, it is separated from chemical precursors or other chemicals which are involved in the synthesis of the protein. Accordingly such preparations of the protein have less than about 30%, 20%, 10%, 5% (by dry weight) of chemical precursors or compounds other than the polypeptide of interest.

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Biologically active portions of a polypeptide corresponding to a marker of the invention include polypeptides comprising amino acid sequences sufficiently identical to or derived from the amino acid sequence of the protein corresponding to the marker (e.g., the amino acid sequence listed in the GenBank and IMAGE Consortium database records described herein), which include fewer amino acids than the full length protein, and exhibit at least one activity of the corresponding full-length protein. Typically, biologically active portions comprise a domain or motif with at least one activity of the corresponding protein. A biologically active portion of a protein of the invention can be a polypeptide which is, for example, 10, 25, 50, 100 or more amino acids in length. Moreover, other biologically active portions, in which other regions of the protein are deleted, can be prepared by recombinant techniques and evaluated for one or more of the functional activities of the native form of a polypeptide of the invention.

Preferred polypeptides are encoded by the nucleotide sequences in Tables 1-4. Other useful proteins are substantially identical (e.g., at least about 40%, preferably 50%, 60%, 70%, 80%, 90%, 95%, or 99%) to one of these sequences and retain the functional activity of the protein of the corresponding naturally-occurring protein yet differ in amino acid sequence due to natural allelic variation or mutagenesis.

To determine the percent identity of two amino acid sequences or of two nucleic acids, the sequences are aligned for optimal comparison purposes (e.g., gaps can be introduced in the sequence of a first amino acid or nucleic acid sequence for optimal alignment with a second amino or nucleic acid sequence). The amino acid residues or nucleotides at corresponding amino acid positions or nucleotide positions are then

compared. When a position in the first sequence is occupied by the same amino acid residue or nucleotide as the corresponding position in the second sequence, then the molecules are identical at that position. The percent identity between the two sequences is a function of the number of identical positions shared by the sequences (i.e., % identity = # of identical positions/total # of positions (e.g., overlapping positions)  $\times 100$ ). In one embodiment the two sequences are the same length.

The determination of percent identity between two sequences can be accomplished using a mathematical algorithm. A preferred, non-limiting example of a mathematical algorithm utilized for the comparison of two sequences is the algorithm of Karlin and Altschul (1990) Proc. Natl. Acad. Sci. USA 87:2264-2268, modified as in Karlin and Altschul (1993) Proc. Natl. Acad. Sci. USA 90:5873-5877. Such an algorithm is incorporated into the NBLAST and XBLAST programs of Altschul, et al. (1990) J. Mol. Biol. 215:403-410. BLAST nucleotide searches can be performed with the NBLAST program, score = 100, wordlength = 12 to obtain nucleotide sequences homologous to a nucleic acid molecules of the invention. BLAST protein searches can be performed with the XBLAST program, score = 50, wordlength = 3 to obtain amino acid sequences homologous to a protein molecules of the invention. To obtain gapped alignments for comparison purposes, Gapped BLAST can be utilized as described in Altschul et al. (1997) Nucleic Acids Res. 25:3389-3402. Alternatively, PSI-Blast can be used to perform an iterated search which detects distant relationships between 20 molecules. When utilizing BLAST, Gapped BLAST, and PSI-Blast programs, the default parameters of the respective programs (e.g., XBLAST and NBLAST) can be used. See http://www.ncbi.nlm.nih.gov. Another preferred, non-limiting example of a mathematical algorithm utilized for the comparison of sequences is the algorithm of Myers and Miller, (1988) CABIOS 4:11-17. Such an algorithm is incorporated into the ALIGN program (version 2.0) which is part of the GCG sequence alignment software package. When utilizing the ALIGN program for comparing amino acid sequences, a PAM120 weight residue table, a gap length penalty of 12, and a gap penalty of 4 can be used. Yet another useful algorithm for identifying regions of local sequence similarity and alignment is the FASTA algorithm as described in Pearson and Lipman (1988) Proc. Natl. Acad. Sci. USA 85:2444-2448. When using the FASTA algorithm for

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comparing nucleotide or amino acid sequences, a PAM120 weight residue table can, for example, be used with a k-tuple value of 2.

The percent identity between two sequences can be determined using techniques similar to those described above, with or without allowing gaps. In calculating percent identity, only exact matches are counted.

The invention also provides chimeric or fusion proteins corresponding to a marker of the invention. As used herein, a "chimeric protein" or "fusion protein" comprises all or part (preferably a biologically active part) of a polypeptide corresponding to a marker of the invention operably linked to a heterologous polypeptide (*i.e.*, a polypeptide other than the polypeptide corresponding to the marker). Within the fusion protein, the term "operably linked" is intended to indicate that the polypeptide of the invention and the heterologous polypeptide are fused in-frame to each other. The heterologous polypeptide can be fused to the amino-terminus or the carboxyl-terminus of the polypeptide of the invention.

One useful fusion protein is a GST fusion protein in which a polypeptide corresponding to a marker of the invention is fused to the carboxyl terminus of GST sequences. Such fusion proteins can facilitate the purification of a recombinant polypeptide of the invention.

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In another embodiment, the fusion protein contains a heterologous signal sequence at its amino terminus. For example, the native signal sequence of a polypeptide corresponding to a marker of the invention can be removed and replaced with a signal sequence from another protein. For example, the gp67 secretory sequence of the baculovirus envelope protein can be used as a heterologous signal sequence (Ausubel et al., ed., Current Protocols in Molecular Biology, John Wiley & Sons, NY, 1992). Other examples of eukaryotic heterologous signal sequences include the secretory sequences of melittin and human placental alkaline phosphatase (Stratagene; La Jolla, California). In yet another example, useful prokaryotic heterologous signal sequences include the phoA secretory signal (Sambrook et al., supra) and the protein A secretory signal (Pharmacia Biotech; Piscataway, New Jersey).

In yet another embodiment, the fusion protein is an immunoglobulin fusion protein in which all or part of a polypeptide corresponding to a marker of the invention is fused to sequences derived from a member of the immunoglobulin protein family.

The immunoglobulin fusion proteins of the invention can be incorporated into pharmaceutical compositions and administered to a subject to inhibit an interaction between a ligand (soluble or membrane-bound) and a protein on the surface of a cell (receptor), to thereby suppress signal transduction *in vivo*. The immunoglobulin fusion protein can be used to affect the bioavailability of a cognate ligand of a polypeptide of the invention. Inhibition of ligand/receptor interaction can be useful therapeutically, both for treating proliferative and differentiative disorders and for modulating (*e.g.* promoting or inhibiting) cell survival. Moreover, the immunoglobulin fusion proteins of the invention can be used as immunogens to produce antibodies directed against a polypeptide of the invention in a subject, to purify ligands and in screening assays to identify molecules which inhibit the interaction of receptors with ligands.

Chimeric and fusion proteins of the invention can be produced by standard recombinant DNA techniques. In another embodiment, the fusion gene can be synthesized by conventional techniques including automated DNA synthesizers.

Alternatively, PCR amplification of gene fragments can be carried out using anchor primers which give rise to complementary overhangs between two consecutive gene fragments which can subsequently be annealed and re-amplified to generate a chimeric gene sequence (see, e.g., Ausubel et al., supra). Moreover, many expression vectors are commercially available that already encode a fusion moiety (e.g., a GST polypeptide).

A nucleic acid encoding a polypeptide of the invention can be cloned into such an expression vector such that the fusion moiety is linked in-frame to the polypeptide of the invention.

A signal sequence can be used to facilitate secretion and isolation of the secreted protein or other proteins of interest. Signal sequences are typically characterized by a core of hydrophobic amino acids which are generally cleaved from the mature protein during secretion in one or more cleavage events. Such signal peptides contain processing sites that allow cleavage of the signal sequence from the mature proteins as they pass through the secretory pathway. Thus, the invention pertains to the described polypeptides having a signal sequence, as well as to polypeptides from which the signal sequence has been proteolytically cleaved (*i.e.*, the cleavage products). In one embodiment, a nucleic acid sequence encoding a signal sequence can be operably linked in an expression vector to a protein of interest, such as a protein which is ordinarily not

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secreted or is otherwise difficult to isolate. The signal sequence directs secretion of the protein, such as from a eukaryotic host into which the expression vector is transformed, and the signal sequence is subsequently or concurrently cleaved. The protein can then be readily purified from the extracellular medium by art recognized methods.

Alternatively, the signal sequence can be linked to the protein of interest using a sequence which facilitates purification, such as with a GST domain.

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The present invention also pertains to variants of the polypeptides corresponding to individual markers of the invention. Such variants have an altered amino acid sequence which can function as either agonists (mimetics) or as antagonists. Variants can be generated by mutagenesis, e.g., discrete point mutation or truncation. An agonist can retain substantially the same, or a subset, of the biological activities of the naturally occurring form of the protein. An antagonist of a protein can inhibit one or more of the activities of the naturally occurring form of the protein by, for example, competitively binding to a downstream or upstream member of a cellular signaling cascade which includes the protein of interest. Thus, specific biological effects can be elicited by treatment with a variant of limited function. Treatment of a subject with a variant having a subset of the biological activities of the naturally occurring form of the protein can have fewer side effects in a subject relative to treatment with the naturally occurring form of the protein.

Variants of a protein of the invention which function as either agonists (mimetics) or as antagonists can be identified by screening combinatorial libraries of mutants, e.g., truncation mutants, of the protein of the invention for agonist or antagonist activity. In one embodiment, a variegated library of variants is generated by combinatorial mutagenesis at the nucleic acid level and is encoded by a variegated gene library. A variegated library of variants can be produced by, for example, enzymatically ligating a mixture of synthetic oligonucleotides into gene sequences such that a degenerate set of potential protein sequences is expressible as individual polypeptides, or alternatively, as a set of larger fusion proteins (e.g., for phage display). There are a variety of methods which can be used to produce libraries of potential variants of the polypeptides of the invention from a degenerate oligonucleotide sequence. Methods for synthesizing degenerate oligonucleotides are known in the art (see, e.g., Narang, 1983,

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Tetrahedron 39:3; Itakura et al., 1984, Annu. Rev. Biochem. 53:323; Itakura et al., 1984, Science 198:1056; Ike et al., 1983 Nucleic Acid Res. 11:477).

In addition, libraries of fragments of the coding sequence of a polypeptide corresponding to a marker of the invention can be used to generate a variegated population of polypeptides for screening and subsequent selection of variants. For example, a library of coding sequence fragments can be generated by treating a double stranded PCR fragment of the coding sequence of interest with a nuclease under conditions wherein nicking occurs only about once per molecule, denaturing the double stranded DNA, renaturing the DNA to form double stranded DNA which can include sense/antisense pairs from different nicked products, removing single stranded portions from reformed duplexes by treatment with S1 nuclease, and ligating the resulting fragment library into an expression vector. By this method, an expression library can be derived which encodes amino terminal and internal fragments of various sizes of the protein of interest.

Several techniques are known in the art for screening gene products of combinatorial libraries made by point mutations or truncation, and for screening cDNA libraries for gene products having a selected property. The most widely used techniques, which are amenable to high through-put analysis, for screening large gene libraries typically include cloning the gene library into replicable expression vectors, transforming appropriate cells with the resulting library of vectors, and expressing the combinatorial genes under conditions in which detection of a desired activity facilitates isolation of the vector encoding the gene whose product was detected. Recursive ensemble mutagenesis (REM), a technique which enhances the frequency of functional mutants in the libraries, can be used in combination with the screening assays to identify variants of a protein of the invention (Arkin and Yourvan, 1992, *Proc. Natl. Acad. Sci. USA* 89:7811-7815; Delgrave *et al.*, 1993, *Protein Engineering* 6(3):327-331).

An isolated polypeptide corresponding to a marker of the invention, or a fragment thereof, can be used as an immunogen to generate antibodies using standard techniques for polyclonal and monoclonal antibody preparation. The full-length polypeptide or protein can be used or, alternatively, the invention provides antigenic peptide fragments for use as immunogens. The antigenic peptide of a protein of the invention comprises at least 8 (preferably 10, 15, 20, or 30 or more) amino acid residues

of the amino acid sequence of one of the polypeptides of the invention, and encompasses an epitope of the protein such that an antibody raised against the peptide forms a specific immune complex with a marker of the invention to which the protein corresponds. Preferred epitopes encompassed by the antigenic peptide are regions that are located on the surface of the protein, e.g., hydrophilic regions. Hydrophobicity sequence analysis, hydrophilicity sequence analysis, or similar analyses can be used to identify hydrophilic regions.

An immunogen typically is used to prepare antibodies by immunizing a suitable (*i.e.* immunocompetent) subject such as a rabbit, goat, mouse, or other mammal or vertebrate. An appropriate immunogenic preparation can contain, for example, recombinantly-expressed or chemically-synthesized polypeptide. The preparation can further include an adjuvant, such as Freund's complete or incomplete adjuvant, or a similar immunostimulatory agent.

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Accordingly, another aspect of the invention pertains to antibodies directed against a polypeptide of the invention. The terms "antibody" and "antibody substance" as used interchangeably herein refer to immunoglobulin molecules and immunologically active portions of immunoglobulin molecules, *i.e.*, molecules that contain an antigen binding site which specifically binds an antigen, such as a polypeptide of the invention, e.g., an epitope of a polypeptide of the invention. A molecule which specifically binds to a given polypeptide of the invention is a molecule which binds the polypeptide, but does not substantially bind other molecules in a sample, *e.g.*, a biological sample, which naturally contains the polypeptide. Examples of immunologically active portions of immunoglobulin molecules include F(ab) and F(ab')<sub>2</sub> fragments which can be generated by treating the antibody with an enzyme such as pepsin. The invention provides polyclonal and monoclonal antibodies. The term "monoclonal antibody" or "monoclonal antibody composition", as used herein, refers to a population of antibody molecules that contain only one species of an antigen binding site capable of immunoreacting with a particular epitope.

Polyclonal antibodies can be prepared as described above by immunizing a suitable subject with a polypeptide of the invention as an immunogen. Preferred polyclonal antibody compositions are ones that have been selected for antibodies directed against a polypeptide or polypeptides of the invention. Particularly preferred

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polyclonal antibody preparations are ones that contain only antibodies directed against a polypeptide or polypeptides of the invention. Particularly preferred immunogen compositions are those that contain no other human proteins such as, for example, immunogen compositions made using a non-human host cell for recombinant expression of a polypeptide of the invention. In such a manner, the only human epitope or epitopes recognized by the resulting antibody compositions raised against this immunogen will be present as part of a polypeptide or polypeptides of the invention.

The antibody titer in the immunized subject can be monitored over time by standard techniques, such as with an enzyme linked immunosorbent assay (ELISA) using immobilized polypeptide. If desired, the antibody molecules can be harvested or 10 isolated from the subject (e.g., from the blood or serum of the subject) and further purified by well-known techniques, such as protein A chromatography to obtain the IgG fraction. Alternatively, antibodies specific for a protein or polypeptide of the invention can be selected or (e.g., partially purified) or purified by, e.g., affinity chromatography. For example, a recombinantly expressed and purified (or partially purified) protein of 15 the invention is produced as described herein, and covalently or non-covalently coupled to a solid support such as, for example, a chromatography column. The column can then be used to affinity purify antibodies specific for the proteins of the invention from a sample containing antibodies directed against a large number of different epitopes, thereby generating a substantially purified antibody composition, i.e., one that is 20 substantially free of contaminating antibodies. By a substantially purified antibody composition is meant, in this context, that the antibody sample contains at most only 30% (by dry weight) of contaminating antibodies directed against epitopes other than those of the desired protein or polypeptide of the invention, and preferably at most 20%, yet more preferably at most 10%, and most preferably at most 5% (by dry weight) of the sample is contaminating antibodies. A purified antibody composition means that at least 99% of the antibodies in the composition are directed against the desired protein or polypeptide of the invention.

At an appropriate time after immunization, e.g., when the specific antibody titers are highest, antibody-producing cells can be obtained from the subject and used to prepare monoclonal antibodies by standard techniques, such as the hybridoma technique originally described by Kohler and Milstein (1975) Nature 256:495-497, the human B

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cell hybridoma technique (see Kozbor et al., 1983, Immunol. Today 4:72), the EBV-hybridoma technique (see Cole et al., pp. 77-96 In Monoclonal Antibodies and Cancer Therapy, Alan R. Liss, Inc., 1985) or trioma techniques. The technology for producing hybridomas is well known (see generally Current Protocols in Immunology, Coligan et al. ed., John Wiley & Sons, New York, 1994). Hybridoma cells producing a monoclonal antibody of the invention are detected by screening the hybridoma culture supernatants for antibodies that bind the polypeptide of interest, e.g., using a standard ELISA assay.

Alternative to preparing monoclonal antibody-secreting hybridomas, a 10 monoclonal antibody directed against a polypeptide of the invention can be identified and isolated by screening a recombinant combinatorial immunoglobulin library (e.g., an antibody phage display library) with the polypeptide of interest. Kits for generating and screening phage display libraries are commercially available (e.g., the Pharmacia Recombinant Phage Antibody System, Catalog No. 27-9400-01; and the Stratagene SurfZAP Phage Display Kit, Catalog No. 240612). Additionally, examples of methods 15 and reagents particularly amenable for use in generating and screening antibody display library can be found in, for example, U.S. Patent No. 5,223,409; PCT Publication No. WO 92/18619; PCT Publication No. WO 91/17271; PCT Publication No. WO 92/20791; PCT Publication No. WO 92/15679; PCT Publication No. WO 93/01288; PCT Publication No. WO 92/01047; PCT Publication No. WO 92/09690; PCT Publication No. WO 90/02809; Fuchs et al. (1991) Bio/Technology 9:1370-1372; Hay et al. (1992) Hum. Antibod. Hybridomas 3:81-85; Huse et al. (1989) Science 246:1275-1281; Griffiths et al. (1993) EMBO J. 12:725-734.

Additionally, recombinant antibodies, such as chimeric and humanized
monoclonal antibodies, comprising both human and non-human portions, which can be
made using standard recombinant DNA techniques, are within the scope of the
invention. A chimeric antibody is a molecule in which different portions are derived
from different animal species, such as those having a variable region derived from a
murine mAb and a human immunoglobulin constant region. (See, e.g., Cabilly et al.,
U.S. Patent No. 4,816,567; and Boss et al., U.S. Patent No. 4,816,397, which are
incorporated herein by reference in their entirety.) Humanized antibodies are antibody
molecules from non-human species having one or more complementarily determining

regions (CDRs) from the non-human species and a framework region from a human immunoglobulin molecule. (See, e.g., Queen, U.S. Patent No. 5,585,089, which is incorporated herein by reference in its entirety.) Such chimeric and humanized monoclonal antibodies can be produced by recombinant DNA techniques known in the art, for example using methods described in PCT Publication No. WO 87/02671; European Patent Application 184,187; European Patent Application 171,496; European Patent Application 173,494; PCT Publication No. WO 86/01533; U.S. Patent No. 4,816,567; European Patent Application 125,023; Better et al. (1988) Science 240:1041-1043; Liu et al. (1987) Proc. Natl. Acad. Sci. USA 84:3439-3443; Liu et al. (1987) J. Immunol. 139:3521-3526; Sun et al. (1987) Proc. Natl. Acad. Sci. USA 84:214-218; Nishimura et al. (1987) Cancer Res. 47:999-1005; Wood et al. (1985) Nature 314:446-449; and Shaw et al. (1988) J. Natl. Cancer Inst. 80:1553-1559); Morrison (1985) Science 229:1202-1207; Oi et al. (1986) Bio/Techniques 4:214; U.S. Patent 5,225,539; Jones et al. (1988) Nature 321:552-525; Verhoeyan et al. (1988) Science 239:1534; and Beidler et al. (1988) J. Immunol. 141:4053-4060.

Antibodies of the invention may be used as therapeutic agents in treating cancers. In a preferred embodiment, completely human antibodies of the invention are used for therapeutic treatment of human cancer patients, particularly those having cervical cancer. Such antibodies can be produced, for example, using transgenic mice which are incapable of expressing endogenous immunoglobulin heavy and light chains genes, but which can express human heavy and light chain genes. The transgenic mice are immunized in the normal fashion with a selected antigen, e.g., all or a portion of a polypeptide corresponding to a marker of the invention. Monoclonal antibodies directed against the antigen can be obtained using conventional hybridoma technology. The human immunoglobulin transgenes harbored by the transgenic mice rearrange during B cell differentiation, and subsequently undergo class switching and somatic mutation. Thus, using such a technique, it is possible to produce therapeutically useful IgG, IgA and IgE antibodies. For an overview of this technology for producing human antibodies, see Lonberg and Huszar (1995) Int. Rev. Immunol. 13:65-93). For a detailed discussion of this technology for producing human antibodies and human monoclonal antibodies and protocols for producing such antibodies, see, e.g., U.S. Patent 5,625,126; U.S. Patent 5,633,425; U.S. Patent 5,569,825; U.S. Patent 5,661,016; and U.S. Patent

5,545,806. In addition, companies such as Abgenix, Inc. (Freemont, CA), can be engaged to provide human antibodies directed against a selected antigen using technology similar to that described above.

Completely human antibodies which recognize a selected epitope can be generated using a technique referred to as "guided selection." In this approach a selected non-human monoclonal antibody, e.g., a murine antibody, is used to guide the selection of a completely human antibody recognizing the same epitope (Jespers et al., 1994, Bio/technology 12:899-903).

An antibody directed against a polypeptide corresponding to a marker of the invention (e.g., a monoclonal antibody) can be used to isolate the polypeptide by 10 standard techniques, such as affinity chromatography or immunoprecipitation. Moreover, such an antibody can be used to detect the marker (e.g., in a cellular lysate or cell supernatant) in order to evaluate the level and pattern of expression of the marker. The antibodies can also be used diagnostically to monitor protein levels in tissues or body fluids (e.g. in an ovary-associated body fluid) as part of a clinical testing 15 procedure, e.g., to, for example, determine the efficacy of a given treatment regimen. Detection can be facilitated by coupling the antibody to a detectable substance. Examples of detectable substances include various enzymes, prosthetic groups, fluorescent materials, luminescent materials, bioluminescent materials, and radioactive materials. Examples of suitable enzymes include horseradish peroxidase, alkaline phosphatase, β-galactosidase, or acetylcholinesterase; examples of suitable prosthetic group complexes include streptavidin/biotin and avidin/biotin; examples of suitable fluorescent materials include umbelliferone, fluorescein, fluorescein isothiocyanate, rhodamine, dichlorotriazinylamine fluorescein, dansyl chloride or phycoerythrin; an example of a luminescent material includes luminol; examples of bioluminescent materials include luciferase, luciferin, and aequorin, and examples of suitable radioactive material include 125 I, 131 I, 35 S or 3 H.

Further, an antibody (or fragment thereof) can be conjugated to a therapeutic moiety such as a cytotoxin, a therapeutic agent or a radioactive metal ion. A cytotoxin or cytotoxic agent includes any agent that is detrimental to cells. Examples include taxol, cytochalasin B, gramicidin D, ethidium bromide, emetine, mitomycin, etoposide, tenoposide, vincristine, vinblastine, colchicin, doxorubicin, daunorubicin, dihydroxy

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anthracin dione, mitoxantrone, mithramycin, actinomycin D, 1-dehydrotestosterone, glucocorticoids, procaine, tetracaine, lidocaine, propranolol, and puromycin and analogs or homologs thereof. Therapeutic agents include, but are not limited to, antimetabolites (e.g., methotrexate, 6-mercaptopurine, 6-thioguanine, cytarabine, 5-fluorouracil decarbazine), alkylating agents (e.g., mechlorethamine, thioepa chlorambucil, melphalan, carmustine (BSNU) and lomustine (CCNU), cyclothosphamide, busulfan, dibromomannitol, streptozotocin, mitomycin C, and cis-dichlorodiamine platinum (II) (DDP) cisplatin), anthracyclines (e.g., daunorubicin (formerly daunomycin) and doxorubicin), antibiotics (e.g., dactinomycin (formerly actinomycin), bleomycin, mithramycin, and anthramycin (AMC)), and anti-mitotic agents (e.g., vincristine and vinblastine).

The conjugates of the invention can be used for modifying a given biological response, the drug moiety is not to be construed as limited to classical chemical therapeutic agents. For example, the drug moiety may be a protein or polypeptide possessing a desired biological activity. Such proteins may include, for example, a toxin such as abrin, ricin A, pseudomonas exotoxin, or diphtheria toxin; a protein such as tumor necrosis factor, alpha.-interferon, beta.-interferon, nerve growth factor, platelet derived growth factor, tissue plasminogen activator; or, biological response modifiers such as, for example, lymphokines, interleukin-1 ("IL-1"), interleukin-2 ("IL-2"), interleukin-6 ("IL-6"), granulocyte macrophase colony stimulating factor ("GM-CSF"), granulocyte colony stimulating factor ("G-CSF"), or other growth factors.

Techniques for conjugating such therapeutic moiety to antibodies are well known, see, e.g., Arnon et al., "Monoclonal Antibodies For Immunotargeting Of Drugs In Cancer Therapy", in Monoclonal Antibodies And Cancer Therapy, Reisfeld et al. (eds.), pp. 243-56 (Alan R. Liss, Inc. 1985); Hellstrom et al., "Antibodies For Drug Delivery", in Controlled Drug Delivery (2nd Ed.), Robinson et al. (eds.), pp. 623-53 (Marcel Dekker, Inc. 1987); Thorpe, "Antibody Carriers Of Cytotoxic Agents In Cancer Therapy: A Review", in Monoclonal Antibodies '84: Biological And Clinical Applications, Pinchera et al. (eds.), pp. 475-506 (1985); "Analysis, Results, And Future Prospective Of The Therapeutic Use Of Radiolabeled Antibody In Cancer Therapy", in Monoclonal Antibodies For Cancer Detection And Therapy, Baldwin et al. (eds.), pp.

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303-16 (Academic Press 1985), and Thorpe et al., "The Preparation And Cytotoxic Properties Of Antibody-Toxin Conjugates", Immunol. Rev., 62:119-58 (1982).

Alternatively, an antibody can be conjugated to a second antibody to form an antibody heteroconjugate as described by Segal in U.S. Patent No. 4,676,980.

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Accordingly, in one aspect, the invention provides substantially purified antibodies or fragments thereof, and non-human antibodies or fragments thereof, which antibodies or fragments specifically bind to a polypeptide comprising an amino acid sequence selected from the group consisting of the amino acid sequences of the present invention, an amino acid sequence encoded by the cDNA of the present invention, a fragment of at least 15 amino acid residues of an amino acid sequence of the present invention, an amino acid sequence which is at least 95% identical to the amino acid sequence of the present invention (wherein the percent identity is determined using the ALIGN program of the GCG software package with a PAM120 weight residue table, a gap length penalty of 12, and a gap penalty of 4) and an amino acid sequence which is encoded by a nucleic acid molecule which hybridizes to a nucleic acid molecule consisting of the nucleic acid molecules of the present invention, or a complement thereof, under conditions of hybridization of 6X SSC at 45°C and washing in 0.2 X SSC, 0.1% SDS at 65°C. In various embodiments, the substantially purified antibodies of the invention, or fragments thereof, can be human, non-human, chimeric and/or humanized antibodies.

In another aspect, the invention provides non-human antibodies or fragments thereof, which antibodies or fragments specifically bind to a polypeptide comprising an amino acid sequence selected from the group consisting of: the amino acid sequence of the present invention, an amino acid sequence encoded by the cDNA of the present invention, a fragment of at least 15 amino acid residues of the amino acid sequence of the present invention, an amino acid sequence which is at least 95% identical to the amino acid sequence of the present invention (wherein the percent identity is determined using the ALIGN program of the GCG software package with a PAM120 weight residue table, a gap length penalty of 12, and a gap penalty of 4) and an amino acid sequence which is encoded by a nucleic acid molecule which hybridizes to a nucleic acid molecule consisting of the nucleic acid molecules of the present invention, or a complement thereof, under conditions of hybridization of 6X SSC at 45°C and washing

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in 0.2 X SSC, 0.1% SDS at 65°C. Such non-human antibodies can be goat, mouse, sheep, horse, chicken, rabbit, or rat antibodies. Alternatively, the non-human antibodies of the invention can be chimeric and/or humanized antibodies. In addition, the non-human antibodies of the invention can be polyclonal antibodies or monoclonal antibodies.

In still a further aspect, the invention provides monoclonal antibodies or fragments thereof, which antibodies or fragments specifically bind to a polypeptide comprising an amino acid sequence selected from the group consisting of the amino acid sequences of the present invention, an amino acid sequence encoded by the cDNA of the present invention, a fragment of at least 15 amino acid residues of an amino acid sequence of the present invention, an amino acid sequence which is at least 95% identical to an amino acid sequence of the present invention (wherein the percent identity is determined using the ALIGN program of the GCG software package with a PAM120 weight residue table, a gap length penalty of 12, and a gap penalty of 4) and an amino acid sequence which is encoded by a nucleic acid molecule which hybridizes to a nucleic acid molecule consisting of the nucleic acid molecules of the present invention, or a complement thereof, under conditions of hybridization of 6X SSC at 45°C and washing in 0.2 X SSC, 0.1% SDS at 65°C. The monoclonal antibodies can be human, humanized, chimeric and/or non-human antibodies.

The substantially purified antibodies or fragments thereof may specifically bind to a signal peptide, a secreted sequence, an extracellular domain, a transmembrane or a cytoplasmic domain or cytoplasmic membrane of a polypeptide of the invention. In a particularly preferred embodiment, the substantially purified antibodies or fragments thereof, the non-human antibodies or fragments thereof, and/or the monoclonal antibodies or fragments thereof, of the invention specifically bind to a secreted sequence or an extracellular domain of the amino acid sequences of the present invention.

Any of the antibodies of the invention can be conjugated to a therapeutic moiety or to a detectable substance. Non-limiting examples of detectable substances that can be conjugated to the antibodies of the invention are an enzyme, a prosthetic group, a fluorescent material, a luminescent material, a bioluminescent material, and a radioactive material.

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The invention also provides a kit containing an antibody of the invention conjugated to a detectable substance, and instructions for use. Still another aspect of the invention is a pharmaceutical composition comprising an antibody of the invention and a pharmaceutically acceptable carrier. In preferred embodiments, the pharmaceutical composition contains an antibody of the invention, a therapeutic moiety, and a pharmaceutically acceptable carrier.

Still another aspect of the invention is a method of making an antibody that specifically recognizes a polypeptide of the present invention, the method comprising immunizing a mammal with a polypeptide. The polypeptide used as an immungen 10 comprises an amino acid sequence selected from the group consisting of the amino acid sequence of the present invention, an amino acid sequence encoded by the cDNA of the nucleic acid molecules of the present invention, a fragment of at least 15 amino acid residues of the amino acid sequence of the present invention, an amino acid sequence which is at least 95% identical to the amino acid sequence of the present invention (wherein the percent identity is determined using the ALIGN program of the GCG software package with a PAM120 weight residue table, a gap length penalty of 12, and a gap penalty of 4) and an amino acid sequence which is encoded by a nucleic acid molecule which hybridizes to a nucleic acid molecule consisting of the nucleic acid molecules of the present invention, or a complement thereof, under conditions of hybridization of 6X SSC at 45°C and washing in 0.2 X SSC, 0.1% SDS at 65°C. After immunization, a sample is collected from the mammal that contains an antibody that specifically recognizes the polypeptide. Preferably, the polypeptide is recombinantly produced using a non-human host cell. Optionally, the antibodies can be further purified from the sample using techniques well known to those of skill in the art. The method can further comprise producing a monoclonal antibody- producing cell from the cells of the mammal. Optionally, antibodies are collected from the antibody-producing cell.

## III. Recombinant Expression Vectors and Host Cells

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30 Another aspect of the invention pertains to vectors, preferably expression vectors, containing a nucleic acid encoding a polypeptide corresponding to a marker of the invention (or a portion of such a polypeptide). As used herein, the term "vector"

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refers to a nucleic acid molecule capable of transporting another nucleic acid to which it has been linked. One type of vector is a "plasmid", which refers to a circular double stranded DNA loop into which additional DNA segments can be ligated. Another type of vector is a viral vector, wherein additional DNA segments can be ligated into the viral genome. Certain vectors are capable of autonomous replication in a host cell into which they are introduced (e.g., bacterial vectors having a bacterial origin of replication and episomal mammalian vectors). Other vectors (e.g., non-episomal mammalian vectors) are integrated into the genome of a host cell upon introduction into the host cell, and thereby are replicated along with the host genome. Moreover, certain vectors, namely expression vectors, are capable of directing the expression of genes to which they are operably linked. In general, expression vectors of utility in recombinant DNA techniques are often in the form of plasmids (vectors). However, the invention is intended to include such other forms of expression vectors, such as viral vectors (e.g., replication defective retroviruses, adenoviruses and adeno-associated viruses), which serve equivalent functions.

The recombinant expression vectors of the invention comprise a nucleic acid of the invention in a form suitable for expression of the nucleic acid in a host cell. This means that the recombinant expression vectors include one or more regulatory sequences, selected on the basis of the host cells to be used for expression, which is operably linked to the nucleic acid sequence to be expressed. Within a recombinant expression vector, "operably linked" is intended to mean that the nucleotide sequence of interest is linked to the regulatory sequence(s) in a manner which allows for expression of the nucleotide sequence (e.g., in an in vitro transcription/translation system or in a host cell when the vector is introduced into the host cell). The term "regulatory sequence" is intended to include promoters, enhancers and other expression control elements (e.g., polyadenylation signals). Such regulatory sequences are described, for example, in Goeddel, Methods in Enzymology: Gene Expression Technology vol.185, Academic Press, San Diego, CA (1991). Regulatory sequences include those which direct constitutive expression of a nucleotide sequence in many types of host cell and those which direct expression of the nucleotide sequence only in certain host cells (e.g., tissue-specific regulatory sequences). It will be appreciated by those skilled in the art that the design of the expression vector can depend on such factors as the choice of the

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host cell to be transformed, the level of expression of protein desired, and the like. The expression vectors of the invention can be introduced into host cells to thereby produce proteins or peptides, including fusion proteins or peptides, encoded by nucleic acids as described herein.

The recombinant expression vectors of the invention can be designed for expression of a polypeptide corresponding to a marker of the invention in prokaryotic (e.g., E. coli) or eukaryotic cells (e.g., insect cells {using baculovirus expression vectors}, yeast cells or mammalian cells). Suitable host cells are discussed further in Goeddel, supra. Alternatively, the recombinant expression vector can be transcribed and translated in vitro, for example using T7 promoter regulatory sequences and T7 polymerase.

Expression of proteins in prokaryotes is most often carried out in *E. coli* with vectors containing constitutive or inducible promoters directing the expression of either fusion or non-fusion proteins. Fusion vectors add a number of amino acids to a protein encoded therein, usually to the amino terminus of the recombinant protein. Such fusion vectors typically serve three purposes: 1) to increase expression of recombinant protein; 2) to increase the solubility of the recombinant protein; and 3) to aid in the purification of the recombinant protein by acting as a ligand in affinity purification. Often, in fusion expression vectors, a proteolytic cleavage site is introduced at the junction of the fusion moiety and the recombinant protein to enable separation of the recombinant protein from the fusion moiety subsequent to purification of the fusion protein. Such enzymes, and their cognate recognition sequences, include Factor Xa, thrombin and enterokinase. Typical fusion expression vectors include pGEX (Pharmacia Biotech Inc; Smith and Johnson, 1988, *Gene* 67:31-40), pMAL (New England Biolabs, Beverly, MA) and pRIT5 (Pharmacia, Piscataway, NJ) which fuse glutathione S-transferase (GST), maltose E binding protein, or protein A, respectively, to the target recombinant protein.

Examples of suitable inducible non-fusion *E. coli* expression vectors include pTrc (Amann *et al.*, 1988, *Gene* 69:301-315) and pET 11d (Studier *et al.*, p. 60-89, In *Gene Expression Technology: Methods in Enzymology* vol.185, Academic Press, San Diego, CA, 1991). Target gene expression from the pTrc vector relies on host RNA polymerase transcription from a hybrid trp-lac fusion promoter. Target gene expression from the pET 11d vector relies on transcription from a T7 gn10-lac fusion promoter

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mediated by a co-expressed viral RNA polymerase (T7 gn1). This viral polymerase is supplied by host strains BL21(DE3) or HMS174(DE3) from a resident prophage harboring a T7 gn1 gene under the transcriptional control of the lacUV 5 promoter.

One strategy to maximize recombinant protein expression in *E. coli* is to express the protein in a host bacteria with an impaired capacity to proteolytically cleave the recombinant protein (Gottesman, p. 119-128, In *Gene Expression Technology: Methods in Enzymology* vol. 185, Academic Press, San Diego, CA, 1990. Another strategy is to alter the nucleic acid sequence of the nucleic acid to be inserted into an expression vector so that the individual codons for each amino acid are those preferentially utilized in *E. coli* (Wada *et al.*, 1992, *Nucleic Acids Res.* 20:2111-2118). Such alteration of nucleic acid sequences of the invention can be carried out by standard DNA synthesis techniques.

In another embodiment, the expression vector is a yeast expression vector. Examples of vectors for expression in yeast *S. cerevisiae* include pYepSec1 (Baldari *et al.*, 1987, *EMBO J.* 6:229-234), pMFa (Kurjan and Herskowitz, 1982, *Cell* 30:933-943), pJRY88 (Schultz *et al.*, 1987, *Gene* 54:113-123), pYES2 (Invitrogen Corporation, San Diego, CA), and pPicZ (Invitrogen Corp, San Diego, CA).

Alternatively, the expression vector is a baculovirus expression vector. Baculovirus vectors available for expression of proteins in cultured insect cells (e.g., Sf 9 cells) include the pAc series (Smith et al., 1983, Mol. Cell Biol. 3:2156-2165) and the pVL series (Lucklow and Summers, 1989, Virology 170:31-39).

In yet another embodiment, a nucleic acid of the invention is expressed in mammalian cells using a mammalian expression vector. Examples of mammalian expression vectors include pCDM8 (Seed, 1987, *Nature* 329:840) and pMT2PC (Kaufman *et al.*, 1987, *EMBO J.* 6:187-195). When used in mammalian cells, the expression vector's control functions are often provided by viral regulatory elements. For example, commonly used promoters are derived from polyoma, Adenovirus 2, cytomegalovirus and Simian Virus 40. For other suitable expression systems for both prokaryotic and eukaryotic cells see chapters 16 and 17 of Sambrook *et al.*, *supra*.

In another embodiment, the recombinant mammalian expression vector is capable of directing expression of the nucleic acid preferentially in a particular cell type (e.g., tissue-specific regulatory elements are used to express the nucleic acid). Tissue-

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specific regulatory elements are known in the art. Non-limiting examples of suitable tissue-specific promoters include the albumin promoter (liver-specific; Pinkert et al., 1987, Genes Dev. 1:268-277), lymphoid-specific promoters (Calame and Eaton, 1988, Adv. Immunol. 43:235-275), in particular promoters of T cell receptors (Winoto and Baltimore, 1989, EMBO J. 8:729-733) and immunoglobulins (Banerji et al., 1983, Cell 33:729-740; Queen and Baltimore, 1983, Cell 33:741-748), neuron-specific promoters (e.g., the neurofilament promoter; Byrne and Ruddle, 1989, Proc. Natl. Acad. Sci. USA 86:5473-5477), pancreas-specific promoters (Edlund et al., 1985, Science 230:912-916), and mammary gland-specific promoters (e.g., milk whey promoter; U.S. Patent No. 4,873,316 and European Application Publication No. 264,166). Developmentally-regulated promoters are also encompassed, for example the murine hox promoters (Kessel and Gruss, 1990, Science 249:374-379) and the α-fetoprotein promoter (Camper and Tilghman, 1989, Genes Dev. 3:537-546).

The invention further provides a recombinant expression vector comprising a 15 DNA molecule of the invention cloned into the expression vector in an antisense orientation. That is, the DNA molecule is operably linked to a regulatory sequence in a manner which allows for expression (by transcription of the DNA molecule) of an RNA molecule which is antisense to the mRNA encoding a polypeptide of the invention. Regulatory sequences operably linked to a nucleic acid cloned in the antisense orientation can be chosen which direct the continuous expression of the antisense RNA 20 molecule in a variety of cell types, for instance viral promoters and/or enhancers, or regulatory sequences can be chosen which direct constitutive, tissue-specific or cell type specific expression of antisense RNA. The antisense expression vector can be in the form of a recombinant plasmid, phagemid, or attenuated virus in which antisense nucleic acids are produced under the control of a high efficiency regulatory region, the activity of which can be determined by the cell type into which the vector is introduced. For a discussion of the regulation of gene expression using antisense genes see Weintraub et al., 1986, Trends in Genetics, Vol. 1(1).

Another aspect of the invention pertains to host cells into which a recombinant

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expression vector of the invention has been introduced. The terms "host cell" and

"recombinant host cell" are used interchangeably herein. It is understood that such
terms refer not only to the particular subject cell but to the progeny or potential progeny

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of such a cell. Because certain modifications may occur in succeeding generations due to either mutation or environmental influences, such progeny may not, in fact, be identical to the parent cell, but are still included within the scope of the term as used herein.

A host cell can be any prokaryotic (e.g., E. coli) or eukaryotic cell (e.g., insect cells, yeast or mammalian cells).

Vector DNA can be introduced into prokaryotic or eukaryotic cells via conventional transformation or transfection techniques. As used herein, the terms "transformation" and "transfection" are intended to refer to a variety of art-recognized techniques for introducing foreign nucleic acid into a host cell, including calcium phosphate or calcium chloride co-precipitation, DEAE-dextran-mediated transfection, lipofection, or electroporation. Suitable methods for transforming or transfecting host cells can be found in Sambrook, et al. (supra), and other laboratory manuals.

For stable transfection of mammalian cells, it is known that, depending upon the expression vector and transfection technique used, only a small fraction of cells may integrate the foreign DNA into their genome. In order to identify and select these integrants, a gene that encodes a selectable marker (e.g., for resistance to antibiotics) is generally introduced into the host cells along with the gene of interest. Preferred selectable markers include those which confer resistance to drugs, such as G418, hygromycin and methotrexate. Cells stably transfected with the introduced nucleic acid can be identified by drug selection (e.g., cells that have incorporated the selectable marker gene will survive, while the other cells die).

A host cell of the invention, such as a prokaryotic or eukaryotic host cell in culture, can be used to produce a polypeptide corresponding to a marker of the invention. Accordingly, the invention further provides methods for producing a polypeptide corresponding to a marker of the invention using the host cells of the invention. In one embodiment, the method comprises culturing the host cell of invention (into which a recombinant expression vector encoding a polypeptide of the invention has been introduced) in a suitable medium such that the marker is produced. In another embodiment, the method further comprises isolating the marker polypeptide from the medium or the host cell.

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The host cells of the invention can also be used to produce nonhuman transgenic animals. For example, in one embodiment, a host cell of the invention is a fertilized oocyte or an embryonic stem cell into which a sequences encoding a polypeptide corresponding to a marker of the invention have been introduced. Such host cells can then be used to create non-human transgenic animals in which exogenous sequences encoding a marker protein of the invention have been introduced into their genome or homologous recombinant animals in which endogenous gene(s) encoding a polypeptide corresponding to a marker of the invention sequences have been altered. Such animals are useful for studying the function and/or activity of the polypeptide corresponding to the marker and for identifying and/or evaluating modulators of polypeptide activity. As used herein, a "transgenic animal" is a non-human animal, preferably a mammal, more preferably a rodent such as a rat or mouse, in which one or more of the cells of the animal includes a transgene. Other examples of transgenic animals include non-human primates, sheep, dogs, cows, goats, chickens, amphibians, etc. A transgene is exogenous DNA which is integrated into the genome of a cell from which a transgenic animal develops and which remains in the genome of the mature animal, thereby directing the expression of an encoded gene product in one or more cell types or tissues of the transgenic animal. As used herein, an "homologous recombinant animal" is a nonhuman animal, preferably a mammal, more preferably a mouse, in which an endogenous gene has been altered by homologous recombination between the endogenous gene and an exogenous DNA molecule introduced into a cell of the animal, e.g., an embryonic cell of the animal, prior to development of the animal.

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A transgenic animal of the invention can be created by introducing a nucleic acid encoding a polypeptide corresponding to a marker of the invention into the male pronuclei of a fertilized oocyte, e.g., by microinjection, retroviral infection, and allowing the oocyte to develop in a pseudopregnant female foster animal. Intronic sequences and polyadenylation signals can also be included in the transgene to increase the efficiency of expression of the transgene. A tissue-specific regulatory sequence(s) can be operably linked to the transgene to direct expression of the polypeptide of the invention to particular cells. Methods for generating transgenic animals via embryo manipulation and microinjection, particularly animals such as mice, have become conventional in the art and are described, for example, in U.S. Patent Nos. 4,736,866 and 4,870,009, U.S.

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Patent No. 4,873,191 and in Hogan, *Manipulating the Mouse Embryo*, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y., 1986. Similar methods are used for production of other transgenic animals. A transgenic founder animal can be identified based upon the presence of the transgene in its genome and/or expression of mRNA encoding the transgene in tissues or cells of the animals. A transgenic founder animal can then be used to breed additional animals carrying the transgene. Moreover, transgenic animals carrying the transgene can further be bred to other transgenic animals carrying other transgenes.

To create an homologous recombinant animal, a vector is prepared which contains at least a portion of a gene encoding a polypeptide corresponding to a marker of the invention into which a deletion, addition or substitution has been introduced to thereby alter, e.g., functionally disrupt, the gene. In a preferred embodiment, the vector is designed such that, upon homologous recombination, the endogenous gene is functionally disrupted (i.e., no longer encodes a functional protein; also referred to as a "knock out" vector). Alternatively, the vector can be designed such that, upon homologous recombination, the endogenous gene is mutated or otherwise altered but still encodes functional protein (e.g., the upstream regulatory region can be altered to thereby alter the expression of the endogenous protein). In the homologous recombination vector, the altered portion of the gene is flanked at its 5' and 3' ends by additional nucleic acid of the gene to allow for homologous recombination to occur between the exogenous gene carried by the vector and an endogenous gene in an embryonic stem cell. The additional flanking nucleic acid sequences are of sufficient length for successful homologous recombination with the endogenous gene. Typically, several kilobases of flanking DNA (both at the 5' and 3' ends) are included in the vector (see, e.g., Thomas and Capecchi, 1987, Cell 51:503 for a description of homologous recombination vectors). The vector is introduced into an embryonic stem cell line (e.g., by electroporation) and cells in which the introduced gene has homologously recombined with the endogenous gene are selected (see, e.g., Li et al., 1992, Cell 69:915). The selected cells are then injected into a blastocyst of an animal (e.g., a mouse) to form aggregation chimeras (see, e.g., Bradley, Teratocarcinomas and Embryonic Stem Cells: A Practical Approach, Robertson, Ed., IRL, Oxford, 1987, pp. 113-152). A chimeric embryo can then be implanted into a suitable pseudopregnant

female foster animal and the embryo brought to term. Progeny harboring the homologously recombined DNA in their germ cells can be used to breed animals in which all cells of the animal contain the homologously recombined DNA by germline transmission of the transgene. Methods for constructing homologous recombination vectors and homologous recombinant animals are described further in Bradley (1991) *Current Opinion in Bio/Technology* 2:823-829 and in PCT Publication NOS. WO 90/11354, WO 91/01140, WO 92/0968, and WO 93/04169.

In another embodiment, transgenic non-human animals can be produced which contain selected systems which allow for regulated expression of the transgene. One example of such a system is the *cre/loxP* recombinase system of bacteriophage P1. For a description of the *cre/loxP* recombinase system, see, *e.g.*, Lakso *et al.* (1992) *Proc.*Natl. Acad. Sci. USA 89:6232-6236. Another example of a recombinase system is the FLP recombinase system of Saccharomyces cerevisiae (O'Gorman *et al.*, 1991, Science 251:1351-1355). If a *cre/loxP* recombinase system is used to regulate expression of the transgene, animals containing transgenes encoding both the *Cre* recombinase and a selected protein are required. Such animals can be provided through the construction of "double" transgenic animals, *e.g.*, by mating two transgenic animals, one containing a transgene encoding a selected protein and the other containing a transgene encoding a recombinase.

Clones of the non-human transgenic animals described herein can also be produced according to the methods described in Wilmut *et al.* (1997) *Nature* 385:810-813 and PCT Publication NOS. WO 97/07668 and WO 97/07669.

## IV. Pharmaceutical Compositions

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25 The nucleic acid molecules, polypeptides, and antibodies (also referred to herein as "active compounds") corresponding to a marker of the invention can be incorporated into pharmaceutical compositions suitable for administration. Such compositions typically comprise the nucleic acid molecule, protein, or antibody and a pharmaceutically acceptable carrier. As used herein the language "pharmaceutically acceptable carrier" is intended to include any and all solvents, dispersion media, coatings, antibacterial and antifungal agents, isotonic and absorption delaying agents, and the like, compatible with pharmaceutical administration. The use of such media and

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agents for pharmaceutically active substances is well known in the art. Except insofar as any conventional media or agent is incompatible with the active compound, use thereof in the compositions is contemplated. Supplementary active compounds can also be incorporated into the compositions.

The invention includes methods for preparing pharmaceutical compositions for modulating the expression or activity of a polypeptide or nucleic acid corresponding to a marker of the invention. Such methods comprise formulating a pharmaceutically acceptable carrier with an agent which modulates expression or activity of a polypeptide or nucleic acid corresponding to a marker of the invention. Such compositions can further include additional active agents. Thus, the invention further includes methods for preparing a pharmaceutical composition by formulating a pharmaceutically acceptable carrier with an agent which modulates expression or activity of a polypeptide or nucleic acid corresponding to a marker of the invention and one or more additional active compounds.

The invention also provides methods (also referred to herein as "screening assays") for identifying modulators, *i.e.*, candidate or test compounds or agents (*e.g.*, peptides, peptidomimetics, peptoids, small molecules or other drugs) which (a) bind to the marker, or (b) have a modulatory (*e.g.*, stimulatory or inhibitory) effect on the activity of the marker or, more specifically, (c) have a modulatory effect on the interactions of the marker with one or more of its natural substrates (*e.g.*, peptide, protein, hormone, co-factor, or nucleic acid), or (d) have a modulatory effect on the expression of the marker. Such assays typically comprise a reaction between the marker and one or more assay components. The other components may be either the test compound itself, or a combination of test compound and a natural binding partner of the marker.

The test compounds of the present invention may be obtained from any available source, including systematic libraries of natural and/or synthetic compounds. Test compounds may also be obtained by any of the numerous approaches in combinatorial library methods known in the art, including: biological libraries; peptoid libraries (libraries of molecules having the functionalities of peptides, but with a novel, non-peptide backbone which are resistant to enzymatic degradation but which nevertheless remain bioactive; see, e.g., Zuckermann et al., 1994, J. Med. Chem. 37:2678-85);

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spatially addressable parallel solid phase or solution phase libraries; synthetic library methods requiring deconvolution; the 'one-bead one-compound' library method; and synthetic library methods using affinity chromatography selection. The biological library and peptoid library approaches are limited to peptide libraries, while the other four approaches are applicable to peptide, non-peptide oligomer or small molecule libraries of compounds (Lam, 1997, *Anticancer Drug Des.* 12:145).

Examples of methods for the synthesis of molecular libraries can be found in the art, for example in: DeWitt et al. (1993) Proc. Natl. Acad. Sci. U.S.A. 90:6909; Erb et al. (1994) Proc. Natl. Acad. Sci. USA 91:11422; Zuckermann et al. (1994). J. Med. Chem. 37:2678; Cho et al. (1993) Science 261:1303; Carrell et al. (1994) Angew. Chem. Int. Ed. Engl. 33:2059; Carell et al. (1994) Angew. Chem. Int. Ed. Engl. 33:2061; and in Gallop et al. (1994) J. Med. Chem. 37:1233.

Libraries of compounds may be presented in solution (e.g., Houghten, 1992, Biotechniques 13:412-421), or on beads (Lam, 1991, Nature 354:82-84), chips (Fodor, 1993, Nature 364:555-556), bacteria and/or spores, (Ladner, USP 5,223,409), plasmids (Cull et al, 1992, Proc Natl Acad Sci USA 89:1865-1869) or on phage (Scott and Smith, 1990, Science 249:386-390; Devlin, 1990, Science 249:404-406; Cwirla et al, 1990, Proc. Natl. Acad. Sci. 87:6378-6382; Felici, 1991, J. Mol. Biol. 222:301-310; Ladner, supra.).

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In one embodiment, the invention provides assays for screening candidate or test compounds which are substrates of a marker or biologically active portion thereof. In another embodiment, the invention provides assays for screening candidate or test compounds which bind to a marker or biologically active portion thereof. Determining the ability of the test compound to directly bind to a marker can be accomplished, for example, by coupling the compound with a radioisotope or enzymatic label such that binding of the compound to the marker can be determined by detecting the labeled marker compound in a complex. For example, compounds (e.g., marker substrates) can be labeled with <sup>125</sup>I, <sup>35</sup>S, <sup>14</sup>C, or <sup>3</sup>H, either directly or indirectly, and the radioisotope detected by direct counting of radioemission or by scintillation counting. Alternatively, assay components can be enzymatically labeled with, for example, horseradish peroxidase, alkaline phosphatase, or luciferase, and the enzymatic label detected by determination of conversion of an appropriate substrate to product.

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In another embodiment, the invention provides assays for screening candidate or test compounds which modulate the activity of a marker or a biologically active portion thereof. In all likelihood, the marker can, *in vivo*, interact with one or more molecules, such as but not limited to, peptides, proteins, hormones, cofactors and nucleic acids. For the purposes of this discussion, such cellular and extracellular molecules are referred to herein as "binding partners" or marker "substrate".

One necessary embodiment of the invention in order to facilitate such screening is the use of the marker to identify its natural *in vivo* binding partners. There are many ways to accomplish this which are known to one skilled in the art. One example is the use of the marker protein as "bait protein" in a two-hybrid assay or three-hybrid assay (see, e.g., U.S. Patent No. 5,283,317; Zervos et al, 1993, Cell 72:223-232; Madura et al, 1993, J. Biol. Chem. 268:12046-12054; Bartel et al ,1993, Biotechniques 14:920-924; Iwabuchi et al, 1993 Oncogene 8:1693-1696; Brent WO94/10300) in order to identify other proteins which bind to or interact with the marker (binding partners) and, therefore, are possibly involved in the natural function of the marker. Such marker binding partners are also likely to be involved in the propagation of signals by the marker or downstream elements of a marker-mediated signaling pathway. Alternatively, such marker binding partners may also be found to be inhibitors of the marker.

The two-hybrid system is based on the modular nature of most transcription factors, which consist of separable DNA-binding and activation domains. Briefly, the assay utilizes two different DNA constructs. In one construct, the gene that encodes a marker protein fused to a gene encoding the DNA binding domain of a known transcription factor (e.g., GAL-4). In the other construct, a DNA sequence, from a library of DNA sequences, that encodes an unidentified protein ("prey" or "sample") is fused to a gene that codes for the activation domain of the known transcription factor. If the "bait" and the "prey" proteins are able to interact, in vivo, forming a marker-dependent complex, the DNA-binding and activation domains of the transcription factor are brought into close proximity. This proximity allows transcription of a reporter gene (e.g., LacZ) which is operably linked to a transcriptional regulatory site responsive to the transcription factor. Expression of the reporter gene can be readily detected and cell colonies containing the functional transcription factor can be isolated and used to obtain the cloned gene which encodes the protein which interacts with the marker protein.

In a further embodiment, assays may be devised through the use of the invention for the purpose of identifying compounds which modulate (e.g., affect either positively or negatively) interactions between a marker and its substrates and/or binding partners. Such compounds can include, but are not limited to, molecules such as antibodies, peptides, hormones, oligonucleotides, nucleic acids, and analogs thereof. Such compounds may also be obtained from any available source, including systematic libraries of natural and/or synthetic compounds. The preferred assay components for use in this embodiment is an cervical cancer marker identified herein, the known binding partner and/or substrate of same, and the test compound. Test compounds can be supplied from any source.

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The basic principle of the assay systems used to identify compounds that interfere with the interaction between the marker and its binding partner involves preparing a reaction mixture containing the marker and its binding partner under conditions and for a time sufficient to allow the two products to interact and bind, thus forming a complex. In order to test an agent for inhibitory activity, the reaction mixture is prepared in the presence and absence of the test compound. The test compound can be initially included in the reaction mixture, or can be added at a time subsequent to the addition of the marker and its binding partner. Control reaction mixtures are incubated without the test compound or with a placebo. The formation of any complexes between the marker and its binding partner is then detected. The formation of a complex in the control reaction, but less or no such formation in the reaction mixture containing the test compound, indicates that the compound interferes with the interaction of the marker and its binding partner. Conversely, the formation of more complex in the presence of compound than in the control reaction indicates that the compound may enhance interaction of the marker and its binding partner.

The assay for compounds that interfere with the interaction of the marker with its binding partner may be conducted in a heterogeneous or homogeneous format. Heterogeneous assays involve anchoring either the marker or its binding partner onto a solid phase and detecting complexes anchored to the solid phase at the end of the reaction. In homogeneous assays, the entire reaction is carried out in a liquid phase. In either approach, the order of addition of reactants can be varied to obtain different information about the compounds being tested. For example, test compounds that

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interfere with the interaction between the markers and the binding partners (e.g., by competition) can be identified by conducting the reaction in the presence of the test substance, i.e., by adding the test substance to the reaction mixture prior to or simultaneously with the marker and its interactive binding partner. Alternatively, test compounds that disrupt preformed complexes, e.g., compounds with higher binding constants that displace one of the components from the complex, can be tested by adding the test compound to the reaction mixture after complexes have been formed. The various formats are briefly described below.

In a heterogeneous assay system, either the marker or its binding partner is anchored onto a solid surface or matrix, while the other corresponding non-anchored component may be labeled, either directly or indirectly. In practice, microtitre plates are often utilized for this approach. The anchored species can be immobilized by a number of methods, either non-covalent or covalent, that are typically well known to one who practices the art. Non-covalent attachment can often be accomplished simply by coating 15 the solid surface with a solution of the marker or its binding partner and drying. Alternatively, an immobilized antibody specific for the assay component to be anchored can be used for this purpose. Such surfaces can often be prepared in advance and stored.

In related embodiments, a fusion protein can be provided which adds a domain that allows one or both of the assay components to be anchored to a matrix. For example, glutathione-S-transferase/marker fusion proteins or glutathione-Stransferase/binding partner can be adsorbed onto glutathione sepharose beads (Sigma Chemical, St. Louis, MO) or glutathione derivatized microtiter plates, which are then combined with the test compound or the test compound and either the non-adsorbed marker or its binding partner, and the mixture incubated under conditions conducive to complex formation (e.g., physiological conditions). Following incubation, the beads or microtiter plate wells are washed to remove any unbound assay components, the immobilized complex assessed either directly or indirectly, for example, as described above. Alternatively, the complexes can be dissociated from the matrix, and the level of marker binding or activity determined using standard techniques.

Other techniques for immobilizing proteins on matrices can also be used in the screening assays of the invention. For example, either a marker or a marker binding partner can be immobilized utilizing conjugation of biotin and streptavidin. Biotinylated

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marker protein or target molecules can be prepared from biotin-NHS (N-hydroxysuccinimide) using techniques known in the art (e.g., biotinylation kit, Pierce Chemicals, Rockford, IL), and immobilized in the wells of streptavidin-coated 96 well plates (Pierce Chemical). In certain embodiments, the protein-immobilized surfaces can be prepared in advance and stored.

In order to conduct the assay, the corresponding partner of the immobilized assay component is exposed to the coated surface with or without the test compound. After the reaction is complete, unreacted assay components are removed (e.g., by washing) and any complexes formed will remain immobilized on the solid surface. The detection 10 of complexes anchored on the solid surface can be accomplished in a number of ways. Where the non-immobilized component is pre-labeled, the detection of label immobilized on the surface indicates that complexes were formed. Where the nonimmobilized component is not pre-labeled, an indirect label can be used to detect complexes anchored on the surface; e.g., using a labeled antibody specific for the initially non-immobilized species (the antibody, in turn, can be directly labeled or indirectly labeled with, e.g., a labeled anti-Ig antibody). Depending upon the order of addition of reaction components, test compounds which modulate (inhibit or enhance) complex formation or which disrupt preformed complexes can be detected.

In an alternate embodiment of the invention, a homogeneous assay may be used. This is typically a reaction, analogous to those mentioned above, which is conducted in 20 a liquid phase in the presence or absence of the test compound. The formed complexes are then separated from unreacted components, and the amount of complex formed is determined. As mentioned for heterogeneous assay systems, the order of addition of reactants to the liquid phase can yield information about which test compounds modulate (inhibit or enhance) complex formation and which disrupt preformed 25 complexes.

In such a homogeneous assay, the reaction products may be separated from unreacted assay components by any of a number of standard techniques, including but not limited to: differential centrifugation, chromatography, electrophoresis and immunoprecipitation. In differential centrifugation, complexes of molecules may be separated from uncomplexed molecules through a series of centrifugal steps, due to the different sedimentation equilibria of complexes based on their different sizes and

densities (see, for example, Rivas, G., and Minton, A.P., Trends Biochem Sci 1993 Aug;18(8):284-7). Standard chromatographic techniques may also be utilized to separate complexed molecules from uncomplexed ones. For example, gel filtration chromatography separates molecules based on size, and through the utilization of an appropriate gel filtration resin in a column format, for example, the relatively larger complex may be separated from the relatively smaller uncomplexed components. Similarly, the relatively different charge properties of the complex as compared to the uncomplexed molecules may be exploited to differentially separate the complex from the remaining individual reactants, for example through the use of ion-exchange chromatography resins. Such resins and chromatographic techniques are well known to one skilled in the art (see, e.g., Heegaard, 1998, J Mol. Recognit. 11:141-148; Hage and Tweed, 1997, J. Chromatogr. B. Biomed. Sci. Appl., 699:499-525). Gel electrophoresis may also be employed to separate complexed molecules from unbound species (see, e.g., Ausubel et al (eds.), In: Current Protocols in Molecular Biology, J. Wiley & Sons, New York. 1999). In this technique, protein or nucleic acid complexes are separated 15 based on size or charge, for example. In order to maintain the binding interaction during the electrophoretic process, nondenaturing gels in the absence of reducing agent are typically preferred, but conditions appropriate to the particular interactants will be wellknown to one skilled in the art. Immunoprecipitation is another common technique utilized for the isolation of a protein-protein complex from solution (see, e.g., Ausubel et 20 al (eds.), In: Current Protocols in Molecular Biology, J. Wiley & Sons, New York. 1999). In this technique, all proteins binding to an antibody specific to one of the binding molecules are precipitated from solution by conjugating the antibody to a polymer bead that may be readily collected by centrifugation. The bound assay components are released from the beads (through a specific proteolysis event or other 25 technique well known in the art which will not disturb the protein-protein interaction in the complex), and a second immunoprecipitation step is performed, this time utilizing antibodies specific for the correspondingly different interacting assay component. In this manner, only formed complexes should remain attached to the beads. Variations in complex formation in both the presence and the absence of a test compound can be compared, thus offering information about the ability of the compound to modulate interactions between the marker and its binding partner.

Also within the scope of the present invention are methods for direct detection of interactions between the marker and its natural binding partner and/or a test compound in a homogeneous or heterogeneous assay system without further sample manipulation. For example, the technique of fluorescence energy transfer may be utilized (see, e.g., Lakowicz et al, U.S. Patent No. 5,631,169; Stavrianopoulos et al, U.S. Patent No. 4,868,103). Generally, this technique involves the addition of a fluorophore label on a first 'donor' molecule (e.g., marker or test compound) such that its emitted fluorescent energy will be absorbed by a fluorescent label on a second, 'acceptor' molecule (e.g., marker or test compound), which in turn is able to fluoresce due to the absorbed energy. Alternately, the 'donor' protein molecule may simply utilize the natural fluorescent 10 energy of tryptophan residues. Labels are chosen that emit different wavelengths of light, such that the 'acceptor' molecule label may be differentiated from that of the 'donor'. Since the efficiency of energy transfer between the labels is related to the distance separating the molecules, spatial relationships between the molecules can be assessed. In a situation in which binding occurs between the molecules, the fluorescent emission of the 'acceptor' molecule label in the assay should be maximal. An FET binding event can be conveniently measured through standard fluorometric detection means well known in the art (e.g., using a fluorimeter). A test substance which either enhances or hinders participation of one of the species in the preformed complex will result in the generation of a signal variant to that of background. In this way, test substances that modulate interactions between a marker and its binding partner can be identified in controlled assays.

In another embodiment, modulators of marker expression are identified in a method wherein a cell is contacted with a candidate compound and the expression of mRNA or protein, corresponding to a marker in the cell, is determined. The level of expression of mRNA or protein in the presence of the candidate compound is compared to the level of expression of mRNA or protein in the absence of the candidate compound. The candidate compound can then be identified as a modulator of marker expression based on this comparison. For example, when expression of marker mRNA or protein is greater (statistically significantly greater) in the presence of the candidate compound than in its absence, the candidate compound is identified as a stimulator of marker mRNA or protein expression. Conversely, when expression of marker mRNA

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or protein is less (statistically significantly less) in the presence of the candidate compound than in its absence, the candidate compound is identified as an inhibitor of marker mRNA or protein expression. The level of marker mRNA or protein expression in the cells can be determined by methods described herein for detecting marker mRNA or protein.

In another aspect, the invention pertains to a combination of two or more of the assays described herein. For example, a modulating agent can be identified using a cell-based or a cell free assay, and the ability of the agent to modulate the activity of a marker protein can be further confirmed *in vivo*, *e.g.*, in a whole animal model for cellular transformation and/or tumorigenesis.

This invention further pertains to novel agents identified by the above-described screening assays. Accordingly, it is within the scope of this invention to further use an agent identified as described herein in an appropriate animal model. For example, an agent identified as described herein (e.g., an marker modulating agent, an antisense marker nucleic acid molecule, an marker-specific antibody, or an marker-binding partner) can be used in an animal model to determine the efficacy, toxicity, or side effects of treatment with such an agent. Alternatively, an agent identified as described herein can be used in an animal model to determine the mechanism of action of such an agent. Furthermore, this invention pertains to uses of novel agents identified by the above-described screening assays for treatments as described herein.

It is understood that appropriate doses of small molecule agents and protein or polypeptide agents depends upon a number of factors within the knowledge of the ordinarily skilled physician, veterinarian, or researcher. The dose(s) of these agents will vary, for example, depending upon the identity, size, and condition of the subject or sample being treated, further depending upon the route by which the composition is to be administered, if applicable, and the effect which the practitioner desires the agent to have upon the nucleic acid or polypeptide of the invention. Exemplary doses of a small molecule include milligram or microgram amounts per kilogram of subject or sample weight (e.g. about 1 microgram per kilogram to about 500 milligrams per kilogram, about 100 micrograms per kilogram to about 5 milligrams per kilogram, or about 1 microgram per kilogram to about 50 micrograms per kilogram). Exemplary doses of a protein or polypeptide include gram, milligram or microgram amounts per kilogram of

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subject or sample weight (e.g. about 1 microgram per kilogram to about 5 grams per kilogram, about 100 micrograms per kilogram to about 500 milligrams per kilogram, or about 1 milligram per kilogram to about 50 milligrams per kilogram). It is furthermore understood that appropriate doses of one of these agents depend upon the potency of the agent with respect to the expression or activity to be modulated. Such appropriate doses can be determined using the assays described herein. When one or more of these agents is to be administered to an animal (e.g. a human) in order to modulate expression or activity of a polypeptide or nucleic acid of the invention, a physician, veterinarian, or researcher can, for example, prescribe a relatively low dose at first, subsequently increasing the dose until an appropriate response is obtained. In addition, it is understood that the specific dose level for any particular animal subject will depend upon a variety of factors including the activity of the specific agent employed, the age, body weight, general health, gender, and diet of the subject, the time of administration, the route of administration, the rate of excretion, any drug combination, and the degree of expression or activity to be modulated.

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A pharmaceutical composition of the invention is formulated to be compatible with its intended route of administration. Examples of routes of administration include parenteral, e.g., intravenous, intradermal, subcutaneous, oral (e.g., inhalation), transdermal (topical), transmucosal, and rectal administration. Solutions or suspensions used for parenteral, intradermal, or subcutaneous application can include the following components: a sterile diluent such as water for injection, saline solution, fixed oils, polyethylene glycols, glycerine, propylene glycol or other synthetic solvents; antibacterial agents such as benzyl alcohol or methyl parabens; antioxidants such as ascorbic acid or sodium bisulfite; chelating agents such as ethylenediamine-tetraacetic acid; buffers such as acetates, citrates or phosphates and agents for the adjustment of tonicity such as sodium chloride or dextrose. pH can be adjusted with acids or bases, such as hydrochloric acid or sodium hydroxide. The parenteral preparation can be enclosed in ampules, disposable syringes or multiple dose vials made of glass or plastic.

Pharmaceutical compositions suitable for injectable use include sterile aqueous solutions (where water soluble) or dispersions and sterile powders for the extemporaneous preparation of sterile injectable solutions or dispersions. For intravenous administration, suitable carriers include physiological saline, bacteriostatic

water, Cremophor EL (BASF; Parsippany, NJ) or phosphate buffered saline (PBS). In all cases, the composition must be sterile and should be fluid to the extent that easy syringability exists. It must be stable under the conditions of manufacture and storage and must be preserved against the contaminating action of microorganisms such as bacteria and fungi. The carrier can be a solvent or dispersion medium containing, for example, water, ethanol, polyol (for example, glycerol, propylene glycol, and liquid polyethylene glycol, and the like), and suitable mixtures thereof. The proper fluidity can be maintained, for example, by the use of a coating such as lecithin, by the maintenance of the required particle size in the case of dispersion and by the use of surfactants. Prevention of the action of microorganisms can be achieved by various antibacterial and antifungal agents, for example, parabens, chlorobutanol, phenol, ascorbic acid, thimerosal, and the like. In many cases, it will be preferable to include isotonic agents, for example, sugars, polyalcohols such as mannitol, sorbitol, or sodium chloride in the composition. Prolonged absorption of the injectable compositions can be brought about by including in the composition an agent which delays absorption, for example, aluminum monostearate and gelatin.

Sterile injectable solutions can be prepared by incorporating the active compound (e.g., a polypeptide or antibody) in the required amount in an appropriate solvent with one or a combination of ingredients enumerated above, as required, followed by filtered sterilization. Generally, dispersions are prepared by incorporating the active compound into a sterile vehicle which contains a basic dispersion medium, and then incorporating the required other ingredients from those enumerated above. In the case of sterile powders for the preparation of sterile injectable solutions, the preferred methods of preparation are vacuum drying and freeze-drying which yields a powder of the active ingredient plus any additional desired ingredient from a previously sterile-filtered solution thereof.

Oral compositions generally include an inert diluent or an edible carrier. They can be enclosed in gelatin capsules or compressed into tablets. For the purpose of oral therapeutic administration, the active compound can be incorporated with excipients and used in the form of tablets, troches, or capsules. Oral compositions can also be prepared using a fluid carrier for use as a mouthwash, wherein the compound in the fluid carrier is applied orally and swished and expectorated or swallowed.

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Pharmaceutically compatible binding agents, and/or adjuvant materials can be included as part of the composition. The tablets, pills, capsules, troches, and the like can contain any of the following ingredients, or compounds of a similar nature: a binder such as microcrystalline cellulose, gum tragacanth or gelatin; an excipient such as starch or lactose, a disintegrating agent such as alginic acid, Primogel, or corn starch; a lubricant such as magnesium stearate or Sterotes; a glidant such as colloidal silicon dioxide; a sweetening agent such as sucrose or saccharin; or a flavoring agent such as peppermint, methyl salicylate, or orange flavoring.

For administration by inhalation, the compounds are delivered in the form of an aerosol spray from a pressurized container or dispenser which contains a suitable propellant, e.g., a gas such as carbon dioxide, or a nebulizer.

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Systemic administration can also be by transmucosal or transdermal means. For transmucosal or transdermal administration, penetrants appropriate to the barrier to be permeated are used in the formulation. Such penetrants are generally known in the art, and include, for example, for transmucosal administration, detergents, bile salts, and fusidic acid derivatives. Transmucosal administration can be accomplished through the use of nasal sprays or suppositories. For transdermal administration, the active compounds are formulated into ointments, salves, gels, or creams as generally known in the art.

The compounds can also be prepared in the form of suppositories (e.g., with conventional suppository bases such as cocoa butter and other glycerides) or retention enemas for rectal delivery.

In one embodiment, the active compounds are prepared with carriers that will protect the compound against rapid elimination from the body, such as a controlled release formulation, including implants and microencapsulated delivery systems. Biodegradable, biocompatible polymers can be used, such as ethylene vinyl acetate, polyanhydrides, polyglycolic acid, collagen, polyorthoesters, and polylactic acid. Methods for preparation of such formulations will be apparent to those skilled in the art. The materials can also be obtained commercially from Alza Corporation and Nova Pharmaceuticals, Inc. Liposomal suspensions (including liposomes having monoclonal antibodies incorporated therein or thereon) can also be used as pharmaceutically

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acceptable carriers. These can be prepared according to methods known to those skilled in the art, for example, as described in U.S. Patent No. 4,522,811.

It is especially advantageous to formulate oral or parenteral compositions in dosage unit form for ease of administration and uniformity of dosage. Dosage unit form as used herein refers to physically discrete units suited as unitary dosages for the subject to be treated; each unit containing a predetermined quantity of active compound calculated to produce the desired therapeutic effect in association with the required pharmaceutical carrier. The specification for the dosage unit forms of the invention are dictated by and directly dependent on the unique characteristics of the active compound and the particular therapeutic effect to be achieved, and the limitations inherent in the art of compounding such an active compound for the treatment of individuals.

For antibodies, the preferred dosage is 0.1 mg/kg to 100 mg/kg of body weight (generally 10 mg/kg to 20 mg/kg). If the antibody is to act in the brain, a dosage of 50 mg/kg to 100 mg/kg is usually appropriate. Generally, partially human antibodies and fully human antibodies have a longer half-life within the human body than other antibodies. Accordingly, lower dosages and less frequent administration is often possible. Modifications such as lipidation can be used to stabilize antibodies and to enhance uptake and tissue penetration (e.g., into the cervical epithelium). A method for lipidation of antibodies is described by Cruikshank et al. (1997) J. Acquired Immune Deficiency Syndromes and Human Retrovirology 14:193.

The nucleic acid molecules corresponding to a marker of the invention can be inserted into vectors and used as gene therapy vectors. Gene therapy vectors can be delivered to a subject by, for example, intravenous injection, local administration (U.S. Patent 5,328,470), or by stereotactic injection (see, e.g., Chen et al., 1994, Proc. Natl. Acad. Sci. USA 91:3054-3057). The pharmaceutical preparation of the gene therapy vector can include the gene therapy vector in an acceptable diluent, or can comprise a slow release matrix in which the gene delivery vehicle is imbedded. Alternatively, where the complete gene delivery vector can be produced intact from recombinant cells, e.g. retroviral vectors, the pharmaceutical preparation can include one or more cells which produce the gene delivery system.

The pharmaceutical compositions can be included in a container, pack, or dispenser together with instructions for administration.

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## V. Computer Readable Means and Arrays

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Computer readable media comprising a marker(s) of the present invention is also provided. As used herein, "computer readable media" refers to any medium that can be read and accessed directly by a computer. Such media include, but are not limited to: magnetic storage media, such as floppy discs, hard disc storage medium, and magnetic tape; optical storage media such as CD-ROM; electrical storage media such as RAM and ROM; and hybrids of these categories such as magnetic/optical storage media. The skilled artisan will readily appreciate how any of the presently known computer readable mediums can be used to create a manufacture comprising computer readable medium having recorded thereon a marker of the present invention.

As used herein, "recorded" refers to a process for storing information on computer readable medium. Those skilled in the art can readily adopt any of the presently known methods for recording information on computer readable medium to generate manufactures comprising the markers of the present invention.

A variety of data processor programs and formats can be used to store the marker information of the present invention on computer readable medium. For example, the nucleic acid sequence corresponding to the markers can be represented in a word processing text file, formatted in commercially-available software such as WordPerfect and MicroSoft Word, or represented in the form of an ASCII file, stored in a database application, such as DB2, Sybase, Oracle, or the like. Any number of dataprocessor structuring formats (e.g., text file or database) may be adapted in order to obtain computer readable medium having recorded thereon the markers of the present invention.

By providing the markers of the invention in computer readable form, one can routinely access the marker sequence information for a variety of purposes. For example, one skilled in the art can use the nucleotide or amino acid sequences of the invention in computer readable form to compare a target sequence or target structural motif with the sequence information stored within the data storage means. Search means are used to identify fragments or regions of the sequences of the invention which match a particular target sequence or target motif.

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The invention also includes an array comprising a marker(s) of the present invention. The array can be used to assay expression of one or more genes in the array. In one embodiment, the array can be used to assay gene expression in a tissue to ascertain tissue specificity of genes in the array. In this manner, up to about 7600 genes can be simultaneously assayed for expression. This allows a profile to be developed showing a battery of genes specifically expressed in one or more tissues.

In addition to such qualitative determination, the invention allows the quantitation of gene expression. Thus, not only tissue specificity, but also the level of expression of a battery of genes in the tissue is ascertainable. Thus, genes can be grouped on the basis of their tissue expression per se and level of expression in that tissue. This is useful, for example, in ascertaining the relationship of gene expression between or among tissues. Thus, one tissue can be perturbed and the effect on gene expression in a second tissue can be determined. In this context, the effect of one cell type on another cell type in response to a biological stimulus can be determined. Such a determination is useful, for example, to know the effect of cell-cell interaction at the level of gene expression. If an agent is administered therapeutically to treat one cell type but has an undesirable effect on another cell type, the invention provides an assay to determine the molecular basis of the undesirable effect and thus provides the opportunity to co-administer a counteracting agent or otherwise treat the undesired effect. Similarly, even within a single cell type, undesirable biological effects can be determined at the molecular level. Thus, the effects of an agent on expression of other than the target gene can be ascertained and counteracted.

In another embodiment, the array can be used to monitor the time course of expression of one or more genes in the array. This can occur in various biological contexts, as disclosed herein, for example development and differentiation, tumor progression, progression of other diseases, *in vitro* processes, such a cellular transformation and senescence, autonomic neural and neurological processes, such as, for example, pain and appetite, and cognitive functions, such as learning or memory.

The array is also useful for ascertaining the effect of the expression of a gene on the expression of other genes in the same cell or in different cells. This provides, for example, for a selection of alternate molecular targets for therapeutic intervention if the ultimate or downstream target cannot be regulated.

The array is also useful for ascertaining differential expression patterns of one or more genes in normal and abnormal cells. This provides a battery of genes that could serve as a molecular target for diagnosis or therapeutic intervention.

## 5 VI. Predictive Medicine

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The present invention pertains to the field of predictive medicine in which diagnostic assays, prognostic assays, pharmacogenomics, and monitoring clinical trails are used for prognostic (predictive) purposes to thereby treat an individual prophylactically. Accordingly, one aspect of the present invention relates to diagnostic assays for determining the level of expression of polypeptides or nucleic acids corresponding to one or more markers of the invention, in order to determine whether an individual is at risk of developing cervical cancer. Such assays can be used for prognostic or predictive purposes to thereby prophylactically treat an individual prior to the onset of the cancer.

Yet another aspect of the invention pertains to monitoring the influence of agents (e.g., drugs or other compounds administered either to inhibit cervical cancer or to treat or prevent any other disorder {i.e. in order to understand any cervical carcinogenic effects that such treatment may have} ) on the expression or activity of a marker of the invention in clinical trials. These and other agents are described in further detail in the following sections.

### A. Diagnostic Assays

An exemplary method for detecting the presence or absence of a polypeptide or nucleic acid corresponding to a marker of the invention in a biological sample involves obtaining a biological sample (e.g. a cervical smear) from a test subject and contacting the biological sample with a compound or an agent capable of detecting the polypeptide or nucleic acid (e.g., mRNA, genomic DNA, or cDNA). The detection methods of the invention can thus be used to detect mRNA, protein, cDNA, or genomic DNA, for example, in a biological sample in vitro as well as in vivo. For example, in vitro techniques for detection of mRNA include Northern hybridizations and in situ hybridizations. In vitro techniques for detection of a polypeptide corresponding to a marker of the invention include enzyme linked immunosorbent assays (ELISAs),

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Western blots, immunoprecipitations, immunohistochemistry and immunofluorescence. *In vitro* techniques for detection of genomic DNA include Southern hybridizations. Furthermore, *in vivo* techniques for detection of a polypeptide corresponding to a marker of the invention include introducing into a subject a labeled antibody directed against the polypeptide. For example, the antibody can be labeled with a radioactive marker whose presence and location in a subject can be detected by standard imaging techniques.

A general principle of such diagnostic and prognostic assays involves preparing a sample or reaction mixture that may contain a marker, and a probe, under appropriate conditions and for a time sufficient to allow the marker and probe to interact and bind, thus forming a complex that can be removed and/or detected in the reaction mixture. These assays can be conducted in a variety of ways.

For example, one method to conduct such an assay would involve anchoring the marker or probe onto a solid phase support, also referred to as a substrate, and detecting target marker/probe complexes anchored on the solid phase at the end of the reaction. In one embodiment of such a method, a sample from a subject, which is to be assayed for presence and/or concentration of marker, can be anchored onto a carrier or solid phase support. In another embodiment, the reverse situation is possible, in which the probe can be anchored to a solid phase and a sample from a subject can be allowed to react as an unanchored component of the assay.

There are many established methods for anchoring assay components to a solid phase. These include, without limitation, marker or probe molecules which are immobilized through conjugation of biotin and streptavidin. Such biotinylated assay components can be prepared from biotin-NHS (N-hydroxy-succinimide) using techniques known in the art (e.g., biotinylation kit, Pierce Chemicals, Rockford, IL), and immobilized in the wells of streptavidin-coated 96 well plates (Pierce Chemical). In certain embodiments, the surfaces with immobilized assay components can be prepared in advance and stored.

Other suitable carriers or solid phase supports for such assays include any material capable of binding the class of molecule to which the marker or probe belongs. Well-known supports or carriers include, but are not limited to, glass, polystyrene, nylon, polypropylene, nylon, polyethylene, dextran, amylases, natural and modified celluloses, polyacrylamides, gabbros, and magnetite.

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In order to conduct assays with the above mentioned approaches, the non-immobilized component is added to the solid phase upon which the second component is anchored. After the reaction is complete, uncomplexed components may be removed (e.g., by washing) under conditions such that any complexes formed will remain immobilized upon the solid phase. The detection of marker/probe complexes anchored to the solid phase can be accomplished in a number of methods outlined herein.

In a preferred embodiment, the probe, when it is the unanchored assay component, can be labeled for the purpose of detection and readout of the assay, either directly or indirectly, with detectable labels discussed herein and which are well-known to one skilled in the art.

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It is also possible to directly detect marker/probe complex formation without further manipulation or labeling of either component (marker or probe), for example by utilizing the technique of fluorescence energy transfer (see, for example, Lakowicz et al., U.S. Patent No. 5,631,169; Stavrianopoulos, et al., U.S. Patent No. 4,868,103). A fluorophore label on the first, 'donor' molecule is selected such that, upon excitation with incident light of appropriate wavelength, its emitted fluorescent energy will be absorbed by a fluorescent label on a second 'acceptor' molecule, which in turn is able to fluoresce due to the absorbed energy. Alternately, the 'donor' protein molecule may simply utilize the natural fluorescent energy of tryptophan residues. Labels are chosen that emit different wavelengths of light, such that the 'acceptor' molecule label may be differentiated from that of the 'donor'. Since the efficiency of energy transfer between the labels is related to the distance separating the molecules, spatial relationships between the molecules can be assessed. In a situation in which binding occurs between the molecules, the fluorescent emission of the 'acceptor' molecule label in the assay should be maximal. An FET binding event can be conveniently measured through standard fluorometric detection means well known in the art (e.g., using a fluorimeter).

In another embodiment, determination of the ability of a probe to recognize a marker can be accomplished without labeling either assay component (probe or marker) by utilizing a technology such as real-time Biomolecular Interaction Analysis (BIA) (see, e.g., Sjolander, S. and Urbaniczky, C., 1991, Anal. Chem. 63:2338-2345 and Szabo et al., 1995, Curr. Opin. Struct. Biol. 5:699-705). As used herein, "BIA" or "surface plasmon resonance" is a technology for studying biospecific interactions in real

time, without labeling any of the interactants (e.g., BIAcore). Changes in the mass at the binding surface (indicative of a binding event) result in alterations of the refractive index of light near the surface (the optical phenomenon of surface plasmon resonance (SPR)), resulting in a detectable signal which can be used as an indication of real-time reactions between biological molecules.

Alternatively, in another embodiment, analogous diagnostic and prognostic assays can be conducted with marker and probe as solutes in a liquid phase. In such an assay, the complexed marker and probe are separated from uncomplexed components by any of a number of standard techniques, including but not limited to: differential centrifugation, chromatography, electrophoresis and immunoprecipitation. In differential centrifugation, marker/probe complexes may be separated from uncomplexed assay components through a series of centrifugal steps, due to the different scdimentation equilibria of complexes based on their different sizes and densities (see, for example, Rivas, G., and Minton, A.P., 1993, Trends Biochem Sci. 18(8):284-7). Standard chromatographic techniques may also be utilized to separate complexed. molecules from uncomplexed ones. For example, gel filtration chromatography separates molecules based on size, and through the utilization of an appropriate gel filtration resin in a column format, for example, the relatively larger complex may be separated from the relatively smaller uncomplexed components. Similarly, the relatively different charge properties of the marker/probe complex as compared to the uncomplexed components may be exploited to differentiate the complex from uncomplexed components, for example through the utilization of ion-exchange chromatography resins. Such resins and chromatographic techniques are well known to one skilled in the art (see, e.g., Heegaard, N.H., 1998, J. Mol. Recognit. Winter 11(1-6):141-8; Hage, D.S., and Tweed, S.A. J Chromatogr B Biomed Sci Appl 1997 Oct 10;699(1-2):499-525). Gel electrophoresis may also be employed to separate complexed assay components from unbound components (see, e.g., Ausubel et al., ed., Current Protocols in Molecular Biology, John Wiley & Sons, New York, 1987-1999). In this technique, protein or nucleic acid complexes are separated based on size or charge, for example. In order to maintain the binding interaction during the electrophoretic process, non-denaturing gel matrix materials and conditions in the

absence of reducing agent are typically preferred. Appropriate conditions to the particular assay and components thereof will be well known to one skilled in the art.

In a particular embodiment, the level of mRNA corresponding to the marker can be determined both by *in situ* and by *in vitro* formats in a biological sample using methods known in the art. The term "biological sample" is intended to include tissues, cells, biological fluids and isolates thereof, isolated from a subject, as well as tissues, cells and fluids present within a subject. Many expression detection methods use isolated RNA. For *in vitro* methods, any RNA isolation technique that does not select against the isolation of mRNA can be utilized for the purification of RNA from cervical cells (see, *e.g.*, Ausubel *et al.*, ed., *Current Protocols in Molecular Biology*, John Wiley & Sons, New York 1987-1999). Additionally, large numbers of tissue samples can readily be processed using techniques well known to those of skill in the art, such as, for example, the single-step RNA isolation process of Chomczynski (1989, U.S. Patent No. 4,843,155).

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The isolated mRNA can be used in hybridization or amplification assays that include, but are not limited to, Southern or Northern analyses, polymerase chain reaction analyses and probe arrays. One preferred diagnostic method for the detection of mRNA levels involves contacting the isolated mRNA with a nucleic acid molecule (probe) that can hybridize to the mRNA encoded by the gene being detected. The nucleic acid probe can be, for example, a full-length cDNA, or a portion thereof, such as an oligonucleotide of at least 7, 15, 30, 50, 100, 250 or 500 nucleotides in length and sufficient to specifically hybridize under stringent conditions to a mRNA or genomic DNA encoding a marker of the present invention. Other suitable probes for use in the diagnostic assays of the invention are described herein. Hybridization of an mRNA with the probe indicates that the marker in question is being expressed.

In one format, the mRNA is immobilized on a solid surface and contacted with a probe, for example by running the isolated mRNA on an agarose gel and transferring the mRNA from the gel to a membrane, such as nitrocellulose. In an alternative format, the probe(s) are immobilized on a solid surface and the mRNA is contacted with the probe(s), for example, in an Affymetrix gene chip array. A skilled artisan can readily adapt known mRNA detection methods for use in detecting the level of mRNA encoded by the markers of the present invention.

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An alternative method for determining the level of mRNA corresponding to a marker of the present invention in a sample involves the process of nucleic acid amplification, e.g., by rtPCR (the experimental embodiment set forth in Mullis, 1987, U.S. Patent No. 4,683,202), ligase chain reaction (Barany, 1991, Proc. Natl. Acad. Sci. USA, 88:189-193), self sustained sequence replication (Guatelli et al., 1990, Proc. Natl. Acad. Sci. USA 87:1874-1878), transcriptional amplification system (Kwoh et al., 1989, Proc. Natl. Acad. Sci. USA 86:1173-1177), Q-Beta Replicase (Lizardi et al., 1988, Bio/Technology 6:1197), rolling circle replication (Lizardi et al., U.S. Patent No. 5,854,033) or any other nucleic acid amplification method, followed by the detection of the amplified molecules using techniques well known to those of skill in the art. These detection schemes are especially useful for the detection of nucleic acid molecules if such molecules are present in very low numbers. As used herein, amplification primers are defined as being a pair of nucleic acid molecules that can anneal to 5' or 3' regions of a gene (plus and minus strands, respectively, or vice-versa) and contain a short region in between. In general, amplification primers are from about 10 to 30 nucleotides in length and flank a region from about 50 to 200 nucleotides in length. Under appropriate conditions and with appropriate reagents, such primers permit the amplification of a nucleic acid molecule comprising the nucleotide sequence flanked by the primers'.

For *in situ* methods, mRNA does not need to be isolated from the cervical cells prior to detection. In such methods, a cell or tissue sample is prepared/processed using known histological methods. The sample is then immobilized on a support, typically a glass slide, and then contacted with a probe that can hybridize to mRNA that encodes the marker.

As an alternative to making determinations based on the absolute expression level of the marker, determinations may be based on the normalized expression level of the marker. Expression levels are normalized by correcting the absolute expression level of a marker by comparing its expression to the expression of a gene that is not a marker, e.g., a housekeeping gene that is constitutively expressed. Suitable genes for normalization include housekeeping genes such as the actin gene, or epithelial cell-specific genes. This normalization allows the comparison of the expression level in one sample, e.g., a patient sample, to another sample, e.g., a non-cervical cancer sample, or between samples from different sources.

Alternatively, the expression level can be provided as a relative expression level. To determine a relative expression level of a marker, the level of expression of the marker is determined for 10 or more samples of normal versus cancer cell isolates, preferably 50 or more samples, prior to the determination of the expression level for the sample in question. The mean expression level of each of the genes assayed in the larger number of samples is determined and this is used as a baseline expression level for the marker. The expression level of the marker determined for the test sample (absolute level of expression) is then divided by the mean expression value obtained for that marker. This provides a relative expression level.

Preferably, the samples used in the baseline determination will be from cervical cancer or from non-cervical cancer cells of cervical tissue. The choice of the cell source is dependent on the use of the relative expression level. Using expression found in normal tissues as a mean expression score aids in validating whether the marker assayed is cervical specific (versus normal cells). In addition, as more data is accumulated, the mean expression value can be revised, providing improved relative expression values based on accumulated data. Expression data from cervical cells provides a means for grading the severity of the cervical cancer state.

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In another embodiment of the present invention, a polypeptide corresponding to a marker is detected. A preferred agent for detecting a polypeptide of the invention is an antibody capable of binding to a polypeptide corresponding to a marker of the invention, preferably an antibody with a detectable label. Antibodies can be polyclonal, or more preferably, monoclonal. An intact antibody, or a fragment thereof (e.g., Fab or F(ab')<sub>2</sub>) can be used. The term "labeled", with regard to the probe or antibody, is intended to encompass direct labeling of the probe or antibody by coupling (i.e., physically linking) a detectable substance to the probe or antibody, as well as indirect labeling of the probe or antibody by reactivity with another reagent that is directly labeled. Examples of indirect labeling include detection of a primary antibody using a fluorescently labeled secondary antibody and end-labeling of a DNA probe with biotin such that it can be detected with fluorescently labeled streptavidin.

Proteins from cervical cells can be isolated using techniques that are well known to those of skill in the art. The protein isolation methods employed can, for example, be such as those described in Harlow and Lane (Harlow and Lane, 1988, *Antibodies: A* 

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Laboratory Manual, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, New York).

A variety of formats can be employed to determine whether a sample contains a protein that binds to a given antibody. Examples of such formats include, but are not limited to, enzyme immunoassay (EIA), radioimmunoassay (RIA), Western blot analysis, immunohistochemistry (IHC) and enzyme linked immunoabsorbant assay (ELISA). A skilled artisan can readily adapt known protein/antibody detection methods for use in determining whether cervical cells express a marker of the present invention.

In one format, antibodies, or antibody fragments, can be used in methods such as Western blots, IHC or immunofluorescence techniques to detect the expressed proteins. In such uses, it is generally preferable to immobilize either the antibody, proteins or cell containing proteins on a solid support. Well-known supports or carriers include glass, polystyrene, polypropylene, polyethylene, dextran, nylon, amylases, natural and modified celluloses, polyacrylamides, gabbros, and magnetite.

One skilled in the art will know many other suitable carriers for binding antibody or antigen, and will be able to adapt such support for use with the present invention. For example, protein isolated from cervical cells can be run on a polyacrylamide gel electrophoresis and immobilized onto a solid phase support such as nitrocellulose. The support can then be washed with suitable buffers followed by treatment with the detectably labeled antibody. The solid phase support can then be washed with the buffer a second time to remove unbound antibody. The amount of bound label on the solid support can then be detected by conventional means.

The invention also encompasses kits for detecting the presence of a polypeptide or nucleic acid corresponding to a marker of the invention in a biological sample (e.g. a cervical smear). Such kits can be used to determine if a subject is suffering from or is at increased risk of developing cervical cancer. For example, the kit can comprise a labeled compound or agent capable of detecting a polypeptide or an mRNA encoding a polypeptide corresponding to a marker of the invention in a biological sample and means for determining the amount of the polypeptide or mRNA in the sample (e.g., an antibody which binds the polypeptide or an oligonucleotide probe which binds to DNA or mRNA encoding the polypeptide). Kits can also include instructions for interpreting the results obtained using the kit.

For antibody-based kits, the kit can comprise, for example: (1) a first antibody (e.g., attached to a solid support) which binds to a polypeptide corresponding to a marker of the invention; and, optionally, (2) a second, different antibody which binds to either the polypeptide or the first antibody and is conjugated to a detectable label.

For oligonucleotide-based kits, the kit can comprise, for example: (1) an oligonucleotide, e.g., a detectably labeled oligonucleotide, which hybridizes to a nucleic acid sequence encoding a polypeptide corresponding to a marker of the invention or (2) a pair of primers useful for amplifying a nucleic acid molecule corresponding to a marker of the invention. The kit can also comprise, e.g., a buffering agent, a 10 preservative, or a protein stabilizing agent. The kit can further comprise components necessary for detecting the detectable label (e.g., an enzyme or a substrate). The kit can also contain a control sample or a series of control samples which can be assayed and compared to the test sample. Each component of the kit can be enclosed within an individual container and all of the various containers can be within a single package, along with instructions for interpreting the results of the assays performed using the kit.

## B. Pharmacogenomics

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Agents or modulators which have a stimulatory or inhibitory effect on expression of a marker of the invention can be administered to individuals to treat (prophylactically or therapeutically) cervical cancer in the patient. In conjunction with such treatment, the pharmacogenomics (i.e., the study of the relationship between an individual's genotype and that individual's response to a foreign compound or drug) of the individual may be considered. Differences in metabolism of therapeutics can lead to severe toxicity or therapeutic failure by altering the relation between dose and blood concentration of the pharmacologically active drug. Thus, the pharmacogenomics of the individual permits the selection of effective agents (e.g., drugs) for prophylactic or therapeutic treatments based on a consideration of the individual's genotype. Such pharmacogenomics can further be used to determine appropriate dosages and therapeutic regimens. Accordingly, the level of expression of a marker of the invention in an individual can be determined to thereby select appropriate agent(s) for the rapeutic or prophylactic treatment of the individual.

Pharmacogenomics deals with clinically significant variations in the response to drugs due to altered drug disposition and abnormal action in affected persons. See, e.g., Linder (1997) Clin. Chem. 43(2):254-266. In general, two types of pharmacogenetic conditions can be differentiated. Genetic conditions transmitted as a single factor altering the way drugs act on the body are referred to as "altered drug action." Genetic conditions transmitted as single factors altering the way the body acts on drugs are referred to as "altered drug metabolism". These pharmacogenetic conditions can occur either as rare defects or as polymorphisms. For example, glucose-6-phosphate dehydrogenase (G6PD) deficiency is a common inherited enzymopathy in which the main clinical complication is hemolysis after ingestion of oxidant drugs (anti-malarials, sulfonamides, analgesics, nitrofurans) and consumption of fava beans.

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As an illustrative embodiment, the activity of drug metabolizing enzymes is a major determinant of both the intensity and duration of drug action. The discovery of genetic polymorphisms of drug metabolizing enzymes (e.g., N-acetyltransferase 2 (NAT 2) and cytochrome P450 enzymes CYP2D6 and CYP2C19) has provided an explanation as to why some patients do not obtain the expected drug effects or show exaggerated drug response and serious toxicity after taking the standard and safe dose of a drug. These polymorphisms are expressed in two phenotypes in the population, the extensive metabolizer (EM) and poor metabolizer (PM). The prevalence of PM is different among different populations. For example, the gene coding for CYP2D6 is highly polymorphic and several mutations have been identified in PM, which all lead to the absence of functional CYP2D6. Poor metabolizers of CYP2D6 and CYP2C19 quite frequently experience exaggerated drug response and side effects when they receive standard doses. If a metabolite is the active therapeutic moiety, a PM will show no therapeutic response, as demonstrated for the analgesic effect of codeine mediated by its CYP2D6formed metabolite morphine. The other extreme are the so called ultra-rapid metabolizers who do not respond to standard doses. Recently, the molecular basis of ultra-rapid metabolism has been identified to be due to CYP2D6 gene amplification.

Thus, the level of expression of a marker of the invention in an individual can be determined to thereby select appropriate agent(s) for therapeutic or prophylactic treatment of the individual. In addition, pharmacogenetic studies can be used to apply genotyping of polymorphic alleles encoding drug-metabolizing enzymes to the

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identification of an individual's drug responsiveness phenotype. This knowledge, when applied to dosing or drug selection, can avoid adverse reactions or therapeutic failure and thus enhance therapeutic or prophylactic efficiency when treating a subject with a modulator of expression of a marker of the invention.

This invention also provides a process for preparing a database comprising at least one of the markers set forth in Tables 1-4. For example, the polynucleotide sequences are stored in a digital storage medium such that a data processing system for standardized representation of the genes that identify a cervical cancer cell is compiled. The data processing system is useful to analyze gene expression between two cells by first selecting a cell suspected of being of a neoplastic phenotype or genotype and then isolating polynucleotides from the cell. The isolated polynucleotides are sequenced. The sequences from the sample are compared with the sequence(s) present in the database using homology search techniques. Greater than 90%, more preferably greater than 95% and more preferably, greater than or equal to 97% sequence identity between the test sequence and the polynucleotides of the present invention is a positive indication that the polynucleotide has been isolated from a cervical cancer cell as defined above.

In an alternative embodiment, the polynucleotides of this invention are sequenced and the information regarding sequence and in some embodiments, relative expression, is stored in any functionally relevant program, e.g., in Compare Report using 20 the SAGE software (available though Dr. Ken Kinzler at John Hopkins University). The Compare Report provides a tabulation of the polynucleotide sequences and their abundance for the samples normalized to a defined number of polynucleotides per library (say 25,000). This is then imported into MS-ACCESS either directly or via copying the data into an Excel spreadsheet first and then from there into MS-ACCESS for additional manipulations. Other programs such as SYBASE or Oracle that permit the comparison of polynucleotide numbers could be used as alternatives to MS-ACCESS. Enhancements to the software can be designed to incorporate these additional functions. These functions consist in standard Boolean, algebraic, and text search operations, applied in various combinations to reduce a large input set of polynucleotides to a manageable subset of a polynucleotide of specifically defined interest.

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One skilled in the art may create groups containing one or more project(s) by combining the counts of specific polynucleotides within a group (e.g., GroupNormal = Normal1 + Normal2, GroupTumor1 + TumorCellLine). Additional characteristic values are also calculated for each tag in the group (e.g., average count, minimum count, maximum count). One skilled in the art may calculate individual tag count ratios between groups, for example the ratio of the average GroupNormal count to the average GroupTumor count for each polynucleotide. A statistical measure of the significance of observed differences in tag counts between groups may be calculated.

# 10 C. Monitoring Clinical Trials

Monitoring the influence of agents (e.g., drug compounds) on the level of expression of a marker of the invention can be applied not only in basic drug screening, but also in clinical trials. For example, the effectiveness of an agent to affect marker expression can be monitored in clinical trials of subjects receiving treatment for cervical cancer. In a preferred embodiment, the present invention provides a method for monitoring the effectiveness of treatment of a subject with an agent (e.g., an agonist, antagonist, peptidomimetic, protein, peptide, nucleic acid, small molecule, or other drug candidate) comprising the steps of (i) obtaining a pre-administration sample from a subject prior to administration of the agent; (ii) detecting the level of expression of one or more selected markers of the invention in the pre-administration sample; (iii) obtaining one or more post-administration samples from the subject; (iv) detecting the level of expression of the marker(s) in the post-administration samples; (v) comparing the level of expression of the marker(s) in the pre-administration sample with the level of expression of the marker(s) in the post-administration sample or samples; and (vi) altering the administration of the agent to the subject accordingly. For example, increased administration of the agent can be desirable to increase expression of the marker(s) to higher levels than detected, i.e., to increase the effectiveness of the agent. Alternatively, decreased administration of the agent can be desirable to decrease expression of the marker(s) to lower levels than detected, i.e., to decrease the effectiveness of the agent.

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## D. Surrogate Markers

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The markers of the invention may serve as surrogate markers for one or more disorders or disease states or for conditions leading up to disease states, and in particular, cervical cancer. As used herein, a "surrogate marker" is an objective biochemical marker which correlates with the absence or presence of a disease or disorder, or with the progression of a disease or disorder (e.g., with the presence or absence of a tumor). The presence or quantity of such markers is independent of the disease. Therefore, these markers may serve to indicate whether a particular course of treatment is effective in lessening a disease state or disorder. Surrogate markers are of particular use when the presence or extent of a disease state or disorder is difficult to assess through standard methodologies (e.g., early stage tumors), or when an assessment of disease progression is desired before a potentially dangerous clinical endpoint is reached (e.g., an assessment of cardiovascular disease may be made using cholesterol levels as a surrogate marker, and an analysis of HIV infection may be made using HIV RNA levels as a surrogate marker, well in advance of the undesirable clinical outcomes of myocardial infarction or fully-developed AIDS). Examples of the use of surrogate markers in the art include: Koomen et al. (2000) J. Mass. Spectrom. 35: 258-264; and James (1994) AIDS Treatment News Archive 209.

The markers of the invention are also useful as pharmacodynamic markers. As used herein, a "pharmacodynamic marker" is an objective biochemical marker which correlates specifically with drug effects. The presence or quantity of a pharmacodynamic marker is not related to the disease state or disorder for which the drug is being administered; therefore, the presence or quantity of the marker is indicative of the presence or activity of the drug in a subject. For example, a pharmacodynamic marker may be indicative of the concentration of the drug in a biological tissue, in that the marker is either expressed or transcribed or not expressed or transcribed in that tissue in relationship to the level of the drug. In this fashion, the distribution or uptake of the drug may be monitored by the pharmacodynamic marker. Similarly, the presence or quantity of the pharmacodynamic marker may be related to the presence or quantity of the metabolic product of a drug, such that the presence or quantity of the marker is indicative of the relative breakdown rate of the drug *in vivo*. Pharmacodynamic markers are of particular use in increasing the sensitivity of detection

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of drug effects, particularly when the drug is administered in low doses. Since even a small amount of a drug may be sufficient to activate multiple rounds of marker transcription or expression, the amplified marker may be in a quantity which is more readily detectable than the drug itself. Also, the marker may be more easily detected due to the nature of the marker itself; for example, using the methods described herein, antibodies may be employed in an immune-based detection system for a protein marker, or marker-specific radiolabeled probes may be used to detect a mRNA marker. Furthermore, the use of a pharmacodynamic marker may offer mechanism-based prediction of risk due to drug treatment beyond the range of possible direct observations. Examples of the use of pharmacodynamic markers in the art include: Matsuda *et al.* US 6,033,862; Hattis *et al.* (1991) *Env. Health Perspect.* 90: 229-238; Schentag (1999) *Am. J. Health-Syst. Pharm.* 56 Suppl. 3: S21-S24; and Nicolau (1999) *Am. J. Health-Syst. Pharm.* 56 Suppl. 3: S16-S20.

The markers of the invention are also useful as pharmacogenomic markers. As used herein, a "pharmacogenomic marker" is an objective biochemical marker which correlates with a specific clinical drug response or susceptibility in a subject (see, e.g., McLeod et al. (1999) Eur. J. Cancer 35(12): 1650-1652). The presence or quantity of the pharmacogenomic marker is related to the predicted response of the subject to a specific drug or class of drugs prior to administration of the drug. By assessing the presence or quantity of one or more pharmacogenomic markers in a subject, a drug therapy which is most appropriate for the subject, or which is predicted to have a greater degree of success, may be selected. For example, based on the presence or quantity of RNA or protein for specific tumor markers in a subject, a drug or course of treatment may be selected that is optimized for the treatment of the specific tumor likely to be present in the subject. Similarly, the presence or absence of a specific sequence mutation in marker DNA may correlate with drug response. The use of pharmacogenomic markers therefore permits the application of the most appropriate treatment for each subject without having to administer the therapy.

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## VII. Experimental Protocol

### A. Subtracted Libraries

Subtracted libraries are generated using a PCR based method that allows the isolation of clones expressed at higher levels in one population of mRNA (tester) compared to another population (driver). Both tester and driver mRNA populations are converted into cDNA by reverse transcription, and then PCR amplified using the SMART PCR kit from Clontech. Tester and driver cDNAs are then hybridized using the PCR-Select cDNA subtraction kit from Clontech. This technique results in both subtraction and normalization, which is an equalization of copy number of low-abundance and high-abundance sequences. After generation of the subtractive libraries, a group of 96 or more clones from each library is tested to confirm differential expression by reverse Southern hybridization.

SEQ ID NOS: 1-705 were identified through the above-described subtractive library hybridization technique, wherein the "tester" source for the subtracted libraries was comprised of cDNA generated from four independent stage IB cervical tumors. The "driver" source for the subtracted libraries was comprised of cDNA generated from at least three independent samples of normal ectocervix that were manually dissected to isolate the epithelial component of the tissue. In some cases, the driver also included cDNA generated from B-lymphocytes, T-lymphocytes, and other white blood cells, in activated and resting states.

SEQ ID NOS: 706-1428 were also identified through the above-described subtractive library hybridization technique, wherein the "tester" source for the subtracted libraries was comprised of cDNA generated from four independent CINIII cervical samples. The "driver" source for the subtracted library was comprised of cDNA generated from six independent normal ectocervix samples that were manually dissected to isolate the epithelial components. The "driver" source also includes cDNA generated from B-lymphocytes, T-lymphocytes, and other white blood cells, in activated and resting states.

### B. Proteomics

Proteins that are secreted by normal and transformed cells in culture are analyzed to identify those proteins that are likely to be secreted by cancerous cells into body fluids. Supernatants are isolated and MWT-CO filters are used to simplify the mixture of proteins. The proteins are then digested with trypsin. The tryptic peptides are loaded onto a microcapillary HPLC column where they are separated, and eluted directly into an ion trap mass spectrometer, through a custom-made electrospray ionization source. Throughout the gradient, sequence data is acquired through fragmentation of the four most intense ions (peptides) that elute off the column, while dynamically excluding those that have already been fragmented. In this way, approximately 2000 scans worth of sequence data are obtained, corresponding to approximately 50 to 200 different proteins in the sample. These data are searched against databases using correlation analysis tools, such as MS-Tag, to identify the proteins in the supernatants.

## 15 VIII . Summary Of The Data Provided In The Tables

Table 1 shows 1428 novel nucleotide sequences identified through subtracted library experiments. These 1428 novel sequences were determined to be novel through various BLAST searches of available databases. The sequences of Table 1 were reinterpreted and those sequences are set forth in Tables 2 and 3. Table 4 sets forth additional sequence (e.g., full-length sequences) for the sequences of Tables 1-3.

The contents of all references, patents, published patent applications, and databases cited throughout this application are hereby incorporated by reference.

## Other Embodiments

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Those skilled in the art will recognize, or be able to ascertain using no more than routine experimentation, many equivalents to the specific embodiments of the invention described herein. Such equivalents are intended to be encompassed by the following claims.

### 30 What is claimed is:

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### Claims

- 1. An isolated nucleic acid molecule selected from the group consisting of:
- a) a nucleic acid molecule comprising a nucleotide sequence which is at least 90% homologous to a nucleotide sequence of Tables 1-4, or a complement thereof;
  - b) a nucleic acid molecule comprising a fragment of a nucleic acid comprising the nucleotide sequence of Tables 1-4, or a complement thereof; and
- c) a nucleic acid molecule comprising the nucleotide sequence of Tables 1-4, or a complement thereof.
  - 2. A vector which contains the nucleic acid molecule of claim 1.
  - 3. A host cell which contains the nucleic acid molecule of claim 1.
- 4. An isolated polypeptide which is encoded by a nucleic acid molecule
  - comprising a nucleotide sequence which is at least 90% homologous to a nucleic acid comprising a nucleotide sequence of Tables 1-4.
- 5. An antibody which selectively binds to a polypeptide of claim 4.
  - 6. A method for producing a polypeptide comprising culturing the host cell of claim 3 under conditions in which the nucleic acid molecule is expressed.
- 7. A method for detecting the presence of a polypeptide of claim 4 in a sample comprising:
  - a) contacting the sample with a compound which selectively binds to the polypeptide; and
- b) determining whether the compound binds to the polypeptide in the sample to thereby detect the presence of a polypeptide of claim 4 in the sample.

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- 8. A kit comprising a compound which selectively binds to the polypeptide of claim 4.
- 5 9. A method for detecting the presence of a nucleic acid molecule of claim 1 in a sample comprising:
  - a) contacting the sample with a nucleic acid probe or primer which selectively hybridizes to the nucleic acid molecule; and
- b) determining whether the nucleic acid probe or primer binds to a nucleic acid molecule in the sample to thereby detect the presence of a nucleic acid molecule of claim 1 in the sample.
  - 10. The method of claim 9, wherein the sample comprises mRNA molecules and is contacted with a nucleic acid probe.
  - 11. The method of claim 9, wherein the sample is isolated from cervical tissue.
    - 12. The method of claim 9, wherein the sample is a tumor sample.
  - 13. A kit comprising a compound which selectively hybridizes to a nucleic acid molecule of claim 1.
- 14. A method of assessing whether a patient is afflicted with cervical cancer or has a pre-malignant condition, the method comprising comparing:
  - a) the level of expression of a marker in a patient sample, wherein the marker is selected from the group consisting of the markers listed in Tables 1-4, and
  - b) the normal level of expression of the marker in a control non-cervical cancer sample,
- wherein a significant difference between the level of expression of the marker in the patient sample and the normal level is an indication that the patient is afflicted with cervical cancer or has a pre-malignant condition.

- 15. The method of claim 14, wherein the patient has CIN.
- 16. The method of claim 14, wherein the patient has SIL.
- 5 17. The method of claim 14, wherein the marker corresponds to a secreted protein.
  - 18. The method of claim 14, wherein the marker corresponds to a transcribed polynucleotide or portion thereof, wherein the polynucleotide comprises the marker.
  - 19. The method of claim 14, wherein the sample comprises cells obtained from the patient.

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- 20. The method of claim 19, wherein the sample is a cervical smear.
- 21. The method of claim 19, wherein the cells are in a fluid selected from the group consisting of a fluid collected by peritoneal rinsing, a fluid collected by uterine rinsing, a uterine fluid, a uterine exudate, a pleural fluid, a cystic fluid, and an cervical exudate.
  - 22. The method of claim 14, wherein the level of expression of the marker in the sample is assessed by detecting the presence in the sample of a protein corresponding to the marker.
- 25 23. The method of claim 17, wherein the presence of the protein is detected using a reagent which specifically binds with the protein.
  - 24. The method of claim 23, wherein the reagent is selected from the group consisting of an antibody, an antibody derivative, and an antibody fragment.

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25. The method of claim 14, wherein the level of expression of the marker in the sample is assessed by detecting the presence in the sample of a transcribed polynucleotide or portion thereof, wherein the transcribed polynucleotide comprises the marker.

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- 26. The method of claim 25, wherein the transcribed polynucleotide is an mRNA.
- The method of claim 25, wherein the transcribed polynucleotide is a 10 cDNA.
  - 28. The method of claim 25, wherein the step of detecting further comprises amplifying the transcribed polynucleotide.
- 15 29. The method of claim 14, wherein the level of expression of the marker in the sample is assessed by detecting the presence in the sample of a transcribed polynucleotide which anneals with the marker or anneals with a portion of a polynucleotide wherein the polynucleotide comprises the marker, under stringent hybridization conditions.

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30. The method of claim 14, wherein the level of expression of the marker in the sample differs from the normal level of expression of the marker in a patient not afflicted with cervical cancer by a factor of at least about 2.

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31. The method of claim 14, wherein the level of expression of the marker in the sample differs from the normal level of expression of the marker in a patient not afflicted with cervical cancer by a factor of at least about 5.

- 32. The method of claim 14, comprising comparing:
- a) the level of expression in the sample of each of a plurality of markers independently selected from the markers listed in Tables 1-4, and
- b) the normal level of expression of each of the plurality of markers in
   samples of the same type obtained from control humans not afflicted with cervical cancer,

wherein the level of expression of more than one of the markers is significantly altered, relative to the corresponding normal levels of expression of the markers, is an indication that the patient is afflicted with cervical cancer or a premalignant condition.

- 33. The method of claim 32, wherein the level of expression of each of the markers is significantly altered, relative to the corresponding normal levels of expression of the markers, is an indication that the patient is afflicted with cervical
   15 cancer.
  - 34. The method of claim 32, wherein the plurality comprises at least three of the markers.
- 20 35. The method of claim 32, wherein the plurality comprises at least five of the markers.
  - 36. A method for monitoring the progression of cervical cancer or a premalignant condition in a patient, the method comprising:
- 25 a) detecting in a patient sample at a first point in time, the expression of a marker, wherein the marker is selected from the group consisting of the markers listed in Tables 1-4;
  - b) repeating step a) at a subsequent point in time; and
- c) comparing the level of expression detected in steps a) and b), and
   therefrom monitoring the progression of cervical cancer or a pre-malignant condition in the patient.

- 37. The method of claim 36, wherein the marker corresponds to a secreted protein.
- 38. The method of claim 36, wherein marker corresponds to a transcribed polynucleotide or portion thereof, wherein the polynucleotide comprises the marker.
  - 39. The method of claim 36, wherein the sample comprises cells obtained from the patient.
- 10 40. The method of claim 39, wherein the patient sample is a cervical smear.
  - 41. The method of claim 39, wherein between the first point in time and the subsequent point in time, the patient has undergone surgery to remove a tumor.
  - 42. A method of assessing the efficacy of a test compound for inhibiting cervical cancer in a patient, the method comprising comparing:
    - a) expression of a marker in a first sample obtained from the patient and exposed to the test compound, wherein the marker is selected from the group consisting of the markers listed in Tables 1-4, and
    - b) expression of the marker in a second sample obtained from the patient, wherein the sample is not exposed to the test compound,

wherein a significantly lower level of expression of the marker in the first sample, relative to the second sample, is an indication that the test compound is efficacious for inhibiting cervical cancer in the patient.

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- 43. The method of claim 42, wherein the first and second samples are portions of a single sample obtained from the patient.
- 44. The method of claim 42, wherein the first and second samples are portions of pooled samples obtained from the patient.

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- 45. A method of assessing the efficacy of a therapy for inhibiting cervical cancer in a patient, the method comprising comparing:
- a) expression of a marker in the first sample obtained from the patient prior to providing at least a portion of the therapy to the patient, wherein the marker is selected from the group consisting of the markers listed in Tables 1-4, and
- b) expression of the marker in a second sample obtained from the patient following provision of the portion of the therapy,

wherein a significantly lower level of expression of the marker in the second sample, relative to the first sample, is an indication that the therapy is efficacious for inhibiting cervical cancer in the patient.

- 46. A method of selecting a composition for inhibiting cervical cancer in a patient, the method comprising:
  - a) obtaining a sample comprising cancer cells from the patient;
- b) separately exposing aliquots of the sample in the presence of a plurality of test compositions;
  - c) comparing expression of a marker in each of the aliquots, wherein the marker is selected from the group consisting of the markers listed in Tables 1-4; and
  - d) selecting one of the test compositions which induces a lower level of expression of the marker in the aliquot containing that test composition, relative to other test compositions.
    - 47. A method of inhibiting cervical cancer in a patient, the method comprising:
      - a) obtaining a sample comprising cancer cells from the patient;
    - b) separately maintaining aliquots of the sample in the presence of a plurality of test compositions;
    - c) comparing expression of a marker in each of the aliquots, wherein the marker is selected from the group consisting of the markers listed in Tables 1-4; and
- d) administering to the patient at least one of the test compositions which induces a lower level of expression of the marker in the aliquot containing that test composition, relative to other test compositions.

- 48. A kit for assessing whether a patient is afflicted with cervical cancer or a pre-malignant condition, the kit comprising reagents for assessing expression of a marker selected from the group consisting of the markers listed in Tables 1-4.
- 49. A kit for assessing the presence of cervical cancer cells or pre-malignant cervical cells or lesions, the kit comprising a nucleic acid probe wherein the probe specifically binds with a transcribed polynucleotide corresponding to a marker selected from the group consisting of the markers listed in Tables 1-4.
- 10 50. A kit for assessing the suitability of each of a plurality of compounds for inhibiting cervical cancer in a patient, the kit comprising:
  - a) the plurality of compounds; and
  - b) a reagent for assessing expression of a marker selected from the group consisting of the markers listed in Tables 1-4.

- 51. A method of making an isolated hybridoma which produces an antibody useful for assessing whether a patient is afflicted with cervical cancer or a pre-malignant condition, the method comprising:
- isolating a protein or protein fragment corresponding to a marker selected 20 from the group consisting of the markers listed in Tables 1-4;

immunizing a mammal using the isolated protein or protein fragment; isolating splenocytes from the immunized mammal;

fusing the isolated splenocytes with an immortalized cell line to form hybridomas; and

- screening individual hybridomas for production of an antibody which specifically binds with the protein or protein fragment to isolate the hybridoma.
  - 52. An antibody produced by a hybridoma made by the method of claim 51.

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53. A kit for assessing the presence of human cervical cancer cells or premalignant cervical cells or lesions, the kit comprising an antibody, wherein the antibody specifically binds with a protein corresponding to a marker selected from the group consisting of the markers listed in Tables 1-4.

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- 54. A method of assessing the cervical cell carcinogenic potential of a test compound, the method comprising:
- a) maintaining separate aliquots of cervical cells in the presence and absence of the test compound; and
- b) comparing expression of a marker in each of the aliquots, wherein the marker is selected from the group consisting of the markers listed in Tables 1-4,

wherein a significantly enhanced level of expression of the marker in the aliquot maintained in the presence of the test compound, relative to the aliquot maintained in the absence of the test compound, is an indication that the test compound possesses human cervical cell carcinogenic potential.

- 55. A kit for assessing the cervical cell carcinogenic potential of a test compound, the kit comprising cervical cells and a reagent for assessing expression of a marker, wherein the marker is selected from the group consisting of the markers listed in Tables 1-4.
- 56. A method of treating a patient afflicted with cervical cancer, the method comprising providing to the patient an antisense oligonucleotide complementary to a polynucleotide corresponding to a marker selected from the markers listed in Tables 1-4.

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57. A method of inhibiting cervical cancer in a patient at risk for developing cervical cancer, the method comprising inhibiting expression of a gene corresponding to a marker selected from the markers listed in Tables 1-4.

### Table 1

Sequence 1 GCCGAGGTACTTTTTTTTTTTTTTTTTTTTTGGACATACTGAGAGAATTTGGAATTATAT GTTATGGTAGAATAAAGATCGAGGTCCATTTTTCTATACATGAAAANTTAAATATTTAG Т TTGGGATTTGAGACTTCGATCTAGGCCTCTGNATTTCTTTCTAGTTTTTTCCCTACCAT Т CTTTAATCGGAGTATCCAAGCCCAATCACCCTGTANCCTATGTCCTAAAGCATCTTGAAT TGNTTGNTTCANGTTTTTNCTTCATGNAGGAGTGTCTTTTGCNCACNCCTCTTAAGCC TCTGGATCCCCACTTCANNCCTCTGAAGGGTTCTGTTAAAANTTCTAACCCTATCTNT AΤ **NGAATTTGTCCCC** Sequence 2 GCCGGAAGAGCAACCGAGATGAAGGTGAAGATGCTGAGCCGGAATCCGGACAATTATGTC CGCGAAACCAAGTTGGACTTACAGAGAGTTCCAAGAAACTATGATCCTGCTTTACATCCT TTTGAGGTCCCACGAGAATATATAAGAGCTTTAAATGCTACCAAACTGGAACGAGTATTT GCAAAACCATTCCTTGCTTCGCTGGATGGTCACCGTGATGGAGTCAATTGCTTGGCAAAG CATCCAGAGAAGCTGGCTACTGTCCTTTCTGGGGCGTGTGATGGAGAGGTTAGAATTTGG AATCTAACTCAGCGGAATTGTATCCGTACCT Sequence 3 CGGAGAGGAGTCCTTACTTAGAGTNAAGCTGAAGGAGCATCACAACCCCAAAGACTGTTA TGTTGTGAAATTTAGGCTGTGTTTTAATAATACTGATGATGATANGATGAAATAGTAAT т TATTGATTACTATATCTACTATATGTCCGTAAGATAGCAGGGTCTTTATACTCGGAATC т CATTTGATCCTCATAGTTTTTATTGGTGTATTATTATCCTCATTTTACAGATACAGAAAC TGAGGCTTCAGAGAGGCTGTGTAATCAAGAGTTTGTATGCCTTTCATCTGAGGAGGTTGA GGACAATCCCAAGTTAGAAAAATAAATGTCTTTAGCATTATTTTTCCTTAATGTTTAGAA TATTAATAAGTTACTCAGATAATCTATTGGAATTTTCTTCATGGCAGGGGGAAGAGGCTA **GAGTTG** G Sequence 4 TACTCAGTTTCCTTATCTATAACATGGGGATAATATTANGTATGCTACATCCGTTGTTA GAGGATCAATATCTGTAAAGCTCTTAGAACATGCATTTTTCTTNTACTAAATGGGNAAGG TCTGGCNGGCGCGGTGGCTCACACCTGGTAATCCCAGCACTGTGGAAGGCTGAGGNGGGG GCAGTTGGGGAGCGAGGGGTTGTACTACTNCAATGTAACTTGCTTTCTCAGAAATTNAGG CNAAAAGTCTTACTGACCATGTAAAGGAAATCCAACAATTATAAACAGTCTCNTGCCTTT AAGGAGCTTATAGTCTAGTTANGAAACCAGACTTAAACATATGAAAAGTTTAAACATTGG Sequence 5 CTCTTTCATTGAAAGGAAATTANGGTTGAACCTCCAGGAGCCCGTCAGAGTCTGAGGAGA GGCTGGCTTNATGTCTAGATACGACGACAGCAAGGCTGCTTAGAGCTAACAGCGCATTGC TC TAACCCAGAGCCAGGCTGTGCTTTTTTTGTACCT Sequence 6 GTTGTTGGCATCCCCATTCTGGCACTCCTCTCTAGGTCTCCACCTCACACGCTGGTTTG

TGGGCGGAGGGCAGGTTGGTGCCGTGGGGTGTCCGGGCACTGGCTGTGCATGCCTTCTTCCTTTCTGTCTCTTTGGCCACCTTTTCCAAAAAGTCACCAGTGACCAATTCTCCCAGT

### Table 1

GT

TTCTTTGGGACTCAATGCCTTGGGCTTGGCATTGGGTAAAGCCGACTGGCAAGTTTCATT CTGACCAAGCTCTATAGTAGTCCGGNGTGGACCTCTTGCCCTCCTGCTGCGGAAAGC TTNCTCAGCCTTTGCTTCTTCACTTATTTACTATTTGCGGGGTCCTGGGGGTACCCTC GG

NCGCTCTAGAACTAAGTGGGATCCCCCCCGGGCTGCAAGGAATTCGAATATCAAGCCTTA TCGAATCCGTCNAACCTTCGAAGGGGG

Sequence 7

GGTGGCGGCCGAGGTACGATACAATTCCGCTGAGTTAGATTCCAAATTCTAACCTCTCC
ATCACACGCCCCAGAAAGGACAGTAGCCAGCTTCTCTGGATGCTTTGCCAAGCAATTGAC
TCCATCACGGTGACCATCCAGCGAAGCAAGGAATGGTTTTGCAAATACTCGTTCCAGTTT
GGTAGCATTTAAAGCTCTTATATATTCTCGTGGGACCTCAAAAGGATGTAAAGCAGGATC
ATAGTTTCTTGGAACTCTCTGTAAGTCCAACTTGGTTTCGCGGACATAATTGTCCGGA
TT

CCGGCTCAGCATCTTCACCTTCATCTCGGTTGCTCTTC

Sequence 8

Sequence 9

AGCAACCGAGATGAAGGTGAAGATGCTGAGCCGGAATCCGGACAATTATGTCCGCGAAACCAAGTTGGACTTACAGAGAGTTCCAAGAAACTATGATCCTGCTTTACATCCTTTTGAGGTCCCACGAGAATATATAAGAGCTTTAAATGCTACCAAACTGGAACGAGTATTTGCAAAACCATTCCTTGCTTCGCTGGATGGTCACCGTGATGGAGTCAATTGCTTGGCAAAGCATCCAGAGAAGCTGGCTACTGTCCTTTCTGGGGCGTGTGATGGAGAGGTTAGAATTTGGAATCTAACTCAGCGGAATTGTATCCGTACCTCGGCCGTTCTANACTAGGGGATCCCCCGGCC

Sequence 10

Sequence 11

GGTGGGGCCGGACCCGGNCCAAGACCTACCCGCCGNGNANTTGGCCTNGGGCC
CTGGGGTTTCCTCCCNAGGGGAAGCCTTGTAGAATCCACCTNGGAAANCCTTGTNGGGTN
CCGCTTGCCCCGTNGNATGGNTGGNGTAGGGGAAAGGCCAAAGTACGCCTTCAAGAATAGG
NAAAAAAGGGANGGGGGGGGGGNACCACTCAAGGCCTGGCAAAGGCCAAGTGGGACCAAG
TGGCCCAAGGGGGCTTCTTGGAATGGTGGNTCTCTCACAAGCTTTGTAANAAAGGTGGTG
GAAGAACCAAGCCTTGNCCCTTTTGTGGGTCGNGNGACCTTGGAATAAAGGGCCAAAAGG

### Table 1

AAGTTTTGGTTTCCCTTGGCCCCCNTTTTTCCCTTNTTTGNTTGGAACCTTTTGGGAAA

GAAAACCCCCCTTGGGACCTTTTTTGGTTTTTTCCTTTGGCNAAAAAAGGGGGCCACCCC TTGGCCAAATTGGATGGTTCCTTGNATTGGTTTTTCCGGTCGCTTTANGGGGCCAATT NA

NAANTTGGTTTGTAAAGGGGAAAG

Sequence 12

Sequence 14

TGGCGGCCGAGGTACGGTATTCTCTTCAAACAAGAGCAAGCCCATGATGATGCCATTTGG
TCAGTTGCTTGGGGGACAACAAGAAGGAAAACTCTGAGACAGTGGTCACAGGCTCCCTA
GATGACCTGGTGAAGGTCTGGAAATGGCGTGATGAGAGGCTGGACCTGCAGTGGAGTCTG
GAGGGACATCAGCTGGGAGTGGTCTGTGGGACATCAGCCACACCCTGCCCATTGCTGC
ATCCAGCTCTNTTGATGCTCATATTCGTCTTTGGGACTTGGAAAATGGCAAACAGATAAA
GTCCATAGATGCAGGACCTGTGGATGCCTGGACTTTTCTCCTGATTCCCAGTN
TCTGGCCACAGGAACTCATGTCGGGAANGTGAACATTTTTGGTGTGGAAAGNGGGAAAAA
GGAA

Sequence 15

Sequence 16

CGGTGGCGCCCCGGGCAGGACGCGGGAAGAGGTAATTTTAATGCCATTTTCATGGGA CACTTGGGAGCTAGATTAGAAGAAGCCAAGACTAGAATCGGGGAGATGAGTTGCAGAGGG NNGTGGTGAAGGTCTGAAGGAAGGTAGGAAAAGGTCGGACACATTCCAGACATATTTAGG GGTGGAGGTGGTTGGATATGGGGAGTT

Sequence 17

TTCGCGGTGGCCCGGCCGGCCAGGTGACTTTAGTCCTCACTCTGTGGGCAGGGGCA
TTACAGCATAGGGGTCCCTTTTGTCAGGGATTTATGATGGCATCACACGCAGGATTCAGA
GAGCATNAATTGAAAAATACATATGATTGGCTGGGCGTGGAGGCTTATGCCTGTAATCCC
AGCACTTTGGGAGGCTGAGGTGGGTGGATCACCTGAGGTCGGAGTTCGAGACCAGTCTG
ACCAACATGGAGAAACCCTTTCTCTACTAAAAATACAAAATTAGCCGGGCGTGGTGGCAC
ATGCCTGTAATCCCAGCTACTAGGGAGGCTGAGGCAGGAGAATTGCTTGAACC

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#### Table 1

Sequence 18

ACACAGATGCTCACACTGGGGCCAGATCTGCATCTGTTAAATCCTGCTGCAGGAATGACA CCTGGTACCTGCCG

Sequence 19

TTTTTTTTTTTCCCCCGGGAGAGGGAATTGGGAAGAGCAAATTGCTGCTGAAAATT

GAGGTACCCAATTTTTTAAGTTCTAAGGTAGCTTTCTCAAAGAAAACCATTTCAGGGT

GTGGCGGCCGAGGTACGATTCTACTGTTTTGTCTTCTAGGATCAACTCGGTCATTACCAC
AGCTCAAACCTGCTTTGGGACTCCCTCCCACAAAACTGGCTCCGGATCAGGGAACACTAC
CAAACCAACAGCAGTCAAATCAGGTCTTTCCTTCTTTAAGTCTGATACCATTAACACAGA
TGCTCACACTGGGGCCAGATCTGCATCTGTTAAATCCTGCTGCAGGAATGACGCCTGGTA
CCTGCCCG

Sequence 22

Sequence 23

C

Sequence 24

### Table 1

GGTACCTGCCCG

Sequence 25

CCGCGGNGGCGCCCCGGGCAGGTACGCGGGAGGCACATTCTTTTCTACGTGAAGAGT TTTGTAAACTGAACTTTGTTTTCAGTTCCGGCTCCAGCCATCCTGGGGTNGCTTGCCA AT

AGATGAATCCCACTCGTTTGACCCATGACGCTCCTTCTTTCATTTCTCCCTCTTTCCC

ACAGCAGTGCATGTCCACCATACCACCTGAGAGTCTGTGGAATCTAATTTTCTGTTATAC
TTCTTTCCTTACAC

Sequence 26

GCGGTGGCGGCCGAGGTACGGATACAATTCCGCTGAGTTAGATTCCAAATTCTAACCTCT CCATCACACGCCCCAGAAAGGACAAGTAGCCAGCTTCTCTGGATGCTTTGCCAAGCAATT GACTCCATCACGGTGACCATCCAGCGAAGCAAGGAATGGTTTTGCAAATACTCGTTCCAG TTTGGTAGCATTTAAAGCTCTTATATATTCTCGTGGGACCTCAAAAGGATGTAAAGCAGG ATCATAGTTTCTTGGAACTCTCTGTAAGTCCAACTTGGTTTCGCGGACATAATTGTCC GG

ATTCCGGCTCAGCATCTTCACCTTCATCTCGGTTGCTCTTC

Sequence 27

ACGCGGCGGCGGCCGAGGTACGGATACAATTCCGCTGAGTTAGATTCCAAATTCTAACCT
CTCCATCACACGCCCCANAAAGGACAGTAGCCAGCTTNTCTGGATGCTTTGCCAAGCAAT
TGACTCCATCACGGTGACCATCCAGCGAAGCAAGGAATGGTTTTGCAAATACTCGTTCCA
GTTTGGTAGCATTTAAAGCTCTTATATATTCTCGTGGGACCTCAAAAGGATGTAAAGCAG
GATCATAGTTTCTTGGAACTCTCTGTAAGNCNCAACTTGGTTATCGCCGGACATAATTGG
ACCCGGTATTTCCGGCTCAGNCATCTTCACCTTTCATCTAAGGNTTGCATNTTCCGGGCC
CGNTCTAAGAACTAGTGGGATCCCCCCGGGGCCTGCAGGGAATTCCGATAATCAAAGGCT
TAATCTGAATACCCGGTCGGACCCTTCGGAGGNGGGGGGCCCCCGNTACCCCAAGCTTT

Sequence 28

CGGCCGAGGTACTCAGTTTCCTTATCTATAACATGGGGATAATATTAGTAGCTACATCGT
TGTTATGAGGATCAATATCTGTAAAGCTCTTAGAACATGCATTTTCTTCTACTAAATTT
TAAGGNCTGGCAGGCGCGGTGGCTCACACCTGGNATCCCAGCACTGTGGAAGGCTGAGGT
GGGGGCAGTGGGGAGCGAGGGGNTGTTACTACTCCAATGTAACTGCTTTCTCAGAAATTA
AGGCAAAAAGTCTTACTGACCATGTNAAGGAAATCCAACAATTATAAACAGTCTCTGCCT
TTAAGGAGCTTATAGTCTAGTTAAGAAACCAGACTTAAACATATGAAAAGTTAAACATTG
GCCAGGCACAGTGGCTCATGCCTATAATCCCAGCACTTTGGGAGGCCAAGGCAGGAGGAT
CACCTGAGGTCANGAGTTCGAGACCAGCCTGACCAGCNTGGAGAAACCCCATCTN
Sequence 29

GCGGTGCCGAGGTACTCAGTTTCCTTATCTATAACATGGGGATAATATTAGTAGCT ACATCGTTGTTATGAGGATCAATATCTGTAAAGCTCTTAGAACATGCATTTTTCTTCTA

TAAATTITAAGGTCTGGCAGGCGCGGTGGCTCACACCTGGTAATCCCAGCACTGTGGAAG GCTGAGGTGGGGGCAGTGGGGAGCGAGGGGTTGTTACTACTCCAATGTAACTGCTTTCTC AGAAATTAAGGCAAAAAGTCTTACTGACCATGTAAAGGGAAATNCAACAATTATAAACAG TCTCT

Sequence 30

GGCGGCCGAGGTACTCAGTTTCCTTATCTATAACATGGGGATAATATTACGTAGCTACAT CGTTGTTATGAGGATCAATATCTGTAAAGCTCTTAGAACATGCATTTTTCTTCTACTAA

TTAAGGCAAAAAGTCTTACTGACCATGTAAAGGAAATCCAACAATTATAAACAGTCTCTG
CCTTTAAGGAGCTTATAGTCTAGTTAAGAAACCAGACTTAAACATTATAAACAGTCTCTG
CCTTTAAGGAGCTTATAGTCTAGTTAAGAAACCAGACTTAAACATATGAAAAGTTAAACA
TTGGCCAGGCACAGTGGCTCATGCCTATAATCCCAGCACTTTGGGAGGCCAAGGCAGGAG
GATCACCTGAGGTCAGGAGTTCGAGACCAGCCTGACCAGCATGGAGAAACCCCATCTTTA
CTAAAAATACAAAACTAGTTGGGCATGGTGGCGCATGCTGTGATCCCAGCTACTTGAGA
GGCTGAGGCGGGAGAATCACTTGAACCCGGGAGGTCGAGCGCCCCCGG
Sequence 31

CCCGCGGTGGCCGAGGTACTCAGTTTCCTTATCTATAACATGGGGATAATATTAGTA GCTACATCGTTGTTATGAGGATCAATATCTGTAAAGCTCTTAGAACATGCATTTTTCTT C

TACTAAATTTTAAGGTCTGGCAGGCGCGGTGGCTCACACCTGGTAATCCCAGCACTGTGG AAGGCTGAGGTGGGGGCAGTGGGGAGCGAGGGGTTGTTACTACTCCAATGTAACTGCTTT CTCAGAAATTAAGGCAAAAAGTCTTACTGACCATGTAAAGGAAATCCAACAATTATAAAC AGTCTCTGCCTTTAAGGAGCTTTATAGTCTAGTTAAGAAA

Sequence 32

GCGGCCGAGGTACGTATGCACTTGCTTGCCATCTAAGCAGGGACAATGGCAGTTCATATC ATGATGTTACTTTGATTCTCTGACCAAACTGGCCTGTGAGCACCCTGGGCCTTTCTTC CT

CTGTCAAAGGCCTTAAGACAGGTTTACCCTGTAGCCAGGTCTGGAAGACAGAGCTGGGTT
AAAGCTGGGTGGGAAAAAAGGTCAGGTTTACATTCCTACGCGGAAAAGGATGTA
ACACGGGGCCACATCCTATGCCCAATCCCAAGGCAGGGAGGCAGGGAAGTGGCTGCCAAA
CCTGTTGTAGGAGGAATAAATGACTTGAGAGTAAGCCTAAGCAAACTCAAGTGGGAAG
GGGAGTGGGCTGTAAAATAGTTTAAGAGACTCTCTCAGGAAGTCAGCGTAATTGATGTGT
AGAAAGGTAACAGTCAACAGTTCTCCTAACAAGACAGCTTCAAAGCAGCTGTCTTTGCCCA
GCGTTTCTTTC

Sequence 33

CCGCGGTGCCGCCGAGGTACGTATGCACTTGCTTGCCATCTAAGCAGGGACAATGGCAG TTCATATCATGATGTTACTTTGATTCTCTGACCAAACTGGCCTGTGAGCACCCTGGGC CT

TTCTTCCTCTGTCAAAGGCCTTAAGACAGGTTTACCCTGTAGCCAGGCTCTGGAAGACAG AGCTGGGTTAAAGCTGGGTGGGAGAAGTGAAAAAGGTCAGGTTTACATTCCTACGCGGAA AAGGATGTAACACGGGGCCACATCCTATGCCCAATCCCAAGGCAGGGAGGCAGGGAAGTG GCTGCCAAACCTGTTGTAGGAGAGTAATAAATGACTTGAGAGTAAGCCTAAGCAAACTCA AGTGGGAAGGGGAGTGGGCTT

Sequence 34

GCGGCCGAGGTACCAGTTAAAGTCTTCTAGCCTGTATCCCCACTCCTTTTTTGCCACTTGC
AAATTCGGTAGCCCAGTTACCCAGAGGGAGGCATAGGAGGGAAAACGAAGACTGAAAAGG
GCTAATATGAGTTTTGTCTCTTACAATTTATCTGCATCTTATCCTTCCCCCACCCCCA

CATTAAATCATTAAACATTCTATCCAAATAGGATGCCCTTCTGTGGAACTGCATATTTG G

AAACCATACTGCCTGTTTAACTTATGCACTCCACTGGGAACTTACAGTATCTGTTTCCC

TAATTTTTGGCTACACCTGGGGACACTTCCCAGGACAACAATGACTTGTAGTCTAGTGCCCAAGAAAGCCCAAAAAGGCCCGGCAAC

Sequence 35

GGTGGCGGCCGAGGTACGGATACAATTCCGCTGAGTTAGATTCCAAATTCTAACCTCTCC

ATCACACGCCCCAGAAAGGACAGTAGCCAGCTTCTCTGGATGCTTTGCCAAGCAATTGAC
TCCATCACGGTGACCATCCAGCGAAGCAAGGAATGGTTTTGCAAATACTCGTTCCAGTTT
GGTAGCATTTAAAGCTCTTATATATTCTCGTGGGACCTCAAAAGGATGTAAAGCAGGATC
ATAGTTTCTTGGAACTCTCTGTAAGTCCAACTTGGTTTCGCGGACATAATTGTCCGGA
TT

CCGGCTCAGCATCTTCACCTTCATCTCGGTTGCTCTTC

Sequence 36

Sequence 37

Sequence 38

CCGCCGAGGTACTTAAGTTTTTCTTCAGTTACAGCTACCATGTGAAAATAATTCTCTGC

Sequence 39

GCCTCCCGCGGTGGCGGCCGAGGTACAGTTTAGAAAACTGTGGGGCTGAGTCCTCGGGG CCGTGGGGCGCAGCGTGGCTGATCACCATCATAACGGGCCTATGGGGATACATTCTCTTA GACATTTTGAAGTAATTAATGCTCTCGTTAGTGATTAAGTCTGTGAAGTAGTCCTTTGC A

TAATCAAATCCATGCTTTTCTTTGATGCCATTGCGACAAACAGTGTAATTATAGAAGCG

GAATTCTTGATTAATCCAAGCCATTCTCGCCACCCAGGGGGGATGTAGCTGCCATTATAT
TCATTGAGGTATTTTCCAAAAAAGGCTGTTCTGTAGCCAGTGTTGTTAAGATATACAGCA
AAAGTCCGAGGCTCATGCATGGCCTGCCACGAGGGGGAAGAGCAGTTCTCGTTGTTGGTG

TAGACATTGTGATTGTGCACATACTTNCCGGTGAGCATGGAGGACCGTGACGGCACATGGGGTGTAGTCACAAAGGCATTGATGAAGGTGGCCCCCCATGTT
Sequence 41

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Sequence 42

NTTGGAGCTCCCGCGGTGGCGGCCGGAGAGCAACCGAGATGAAGGTGAAGATGCTGAGCCGGAATCCGGACAATTATGTCCGCGAAACCAAGTTGGACTTACAGAGAGTTCCAAGAAACTATGATCCTTTTGAGGTCCCACGAGAATATATAAGAGCTTTAAATGC

ACCAAACTGGAACGAGTATTTGCAAAACCATTCCTTGCTTCGCTGGATGGTCACCGTGAT GGAGTCAATTGCTTGGCAAAGCATCCAGAGAAGCTGGCTACTGTCCTTTCTGGGGCGTGT GATGGAGAGGTTAGAATTTGGAATCTAACTCAGCGGAATTGTATCCGTACCT Sequence 43

ATTGGAGCTCCCGCGGTGGCGGCCGGAGAGCAACCGAGATGAAGGTGAAGATGCTGAGCCGGAATCCGGACAATTATGTCCGCGAAACCAAGTTGGACTTACAGAGAGTTCCAAGAAACTATGATCCTTTTGAGGTCCCACGAGAATATATAAGAGCTTTAAATGC

ACCAAACTGGAACGAGTATTTGCAAAACCATTCCTTGCTTCGCTGGATGGTCACCGTGAT GGAGTCAATTGCTTGGCAAAGCATCCAGAGAAGCTGGCTACTGTCCTTTCTGGGGCGTGT GATGGAGAGGTTAGAATTTGGAATCTAACTCAGCGGAATTGTATCCGTACCT Sequence 44

С

TGAGGNGGAAGGATTGCTTGAGCCCAGGAGTTTGAGGCTGCAGTGAGCTATGATCACAAC ACTGCACTCAAGCCTGGGCAACAGAGCCAGGAGCCCTGACTGTAAAAAAATTTTTTACATT AATTTTTAAAAGTGAGGTTTTTACCTGATGATTGNGTAGGTTTCTCCTAGCTCCAAAGT

TCCGGCTCCTACGACTCTAAATATAACCTTCAAGGAAAGNGGAGCTGGTTTACTCTTTTC
TGATAATATCAAGCCATTCCTGGCTGGGCGTGGNGGCTCATGCCTATAATCCCAGCACTT
TGGGAGGCCCCGCGTACCT

Sequence 45

GGGNGGCTCCCACCGCGGTAGGCNGGCCGCCCGGGCCAGGTACGCGGGNAATTCAAGGAT
GGGATTAAAGGATTTAAACCGTTTAGGACCCTAAAAGCATAAAAACCCCTTAGAAAGGAA
AATCTTAGGGCAATACCCATTGGAGGGACCTTAGGGCCTTGGGACCAAAGGACTTTCATG
GACTTAAAAACCACCCCAAAAGGCAATTGGGCAANCCAAAANGCCCCAAAATTAGGNCCA
AATNGGGGATTCTTAACCTTAAAACTTTAAAGGAGGCTTTNTTGGCCCCAGGCCAAAANG
GAAAACTTTCCCCTTCNAGANGGNGGGACCCNGGGCCANCCCTTTCCNGGGAATNGGGGG
GGGAAAAATTT

Sequence 46

Sequence 47

CTAACCTCACATTTAATTGCGTTTGCGCTCACTGCCCCGCTTTTCCAGTCGGGGAAACCT TGTTCGTGCCAGCNTGCAATTTAATNGAATCGGGCCCAACNGCCGCCGGGGGGAGGAGGG CCGGGTTTTTGGCGGTATTGGGGGCGCCTTCTTTCCCGCTTTCCTTTCGCCTCACTT

CTTCGCCTNCCGCCTTCGGGGTCC

Sequence 48

CGCGGTGGCGGCCGGCCNAGGTACAAGNGACAATGCTGGATGCCAAGCAGNTCCCC CCTACCGTCTCACTGCCCCTCAAGACTTCAAGGCCACTCTCCCCATAAACATCATGACTA CAGATTTAGGTGGAAGAGCAGCCATGTTTGAAGGGCACATGTGATGAGTGGGGGGGCAGCA AGATGCCATTTCTGCATCTCCCAGAAGGGATGAGTCTTTGTCCCGATGCAAGCCCCCTCT TCGTTGGGCTCCCAGCAGTGCTTNCCTNCTCCACCCTGCACTTCATTTNGTTCTTTCC CC

**CCCNAACTTTT** 

Sequence 49

GCGGCCGAGGTACAACTAATGGAGCTCAGAAGCTGTCAAGGATATAAGCAGTGCAACCCA AGACCTAAGAATCTTGATGTTGGAAATAAAGATGGAGGAAGCTATGACCTACACAGAGGA CAGTTATGGGATGGAAGGTTAATCAGCCCCGTCTCACTGCAGACATCAACTGGCA AGGCCTAGAGGAGCTACACAGTGTGAATGAAAACATCTATGAGTACCTGCCCGGGCGGCC GGCTCTAGAACTAGTGGATCCCCGG

Sequence 50

GGCGGCCGANGAGCAACCGAGATGAAGGTGAAGATGCTGAGCCCGGAATCCGGACAATT
ATGTCCGCGAAACCAAGTTGGACTTACAGAGAGTTCCAAGAAACTATGATCCTGCTTTAC
ATCCTTTTGAGGTCCCACGAGAATATATAAGAGCTTTAAATGCTACCAAACTGGAACGAG
TATTTGCAAAACCATTCCTTGCTTCGCTGGATGGTCACCGTGATGGAGTCAATTGCTTGG
CAAAGCATCCAGAGAAGCTGGCTACTGTCCTTTCTGGGGCGTGTGATGGAGAGGTTAGAA
TTTGGAATCTAACTCAGCGGAATTGTATCCCGTACC
T

Sequence 51

TGTGATGATCTCATACTTTGNAGTTGNTCTATCTGCANCACTGACTTTC

Sequence 52

CTTTAGGATGAGCAGGTGG

Sequence 53

GTGAAGATGCTGAGCCGGAATCCGGACAATTATGTCCGCGAAACCAAGTTGGACTTACAG
AGAGTTCCNNGAAACTATGATCCTGCTTTACATCCTTTTGAGGTCCCACGAGAATATATA
AGAGCTTTAAATGCTACCAAACTGGAACGAGTATTTGCAAAACCATTCCTTGCTTCGCTG
GATGGTCACCGTGATGGAGTCAATTGCTTGGCAAAGCATCCAGAGAAGCTGGCTACTGTC
CTTTCTGGGGCCGTGTGATGGAGAGGTTAGAAATTTGGAATCTAACTCAAGCCGGAAATT
GTAATCACGTACCTCGGCCCGCTCTAAGAACTAGTGGGATCCCCCGGNGCTGCAGGGAAA
TTCCGATATCAAGGCTTTATCGATACCGGTCNACCCTNGAGGGGGGGGCCCCCGGGTACC
CCAANCTTTTTGG

Sequence 54

CCCCCGCGGGGCCGACGTACACTGGGAAAATGAAGAACTTAACTACATAAAAATAG AGGACAGTCAAAACTTCACAGGGGGGAAATCAAGTTAAATTCAGAGCTGGATTTAGATG ATGCCATTCTAGAGAAGTTTGCTTTCTCCAATGCTCTATGCCTTTCTGTAAAACTGGCA

TTTGGGAAGCATCACTGGATAAATTTTATTGAATCTATTCAAGNCAATTCCTGAGGCTT

AAAAGCTGGGAAGAAAGTGAAACTATCTCATGAAGAAGTTATGCAGAAAATCGGTGAACT CTTTGCTCTAAGGCACCGTATAAACTTTGAAGTTCAGGACCTTCCTGATTACTCCTGA TT

TCTTACTGGGGACAGGAGAAACCNNGGGAAGGGACTTTACCGATAAAAACCGTGGTCAA ATTCCTTTAGCCATTTGGCCCCGAAAGANGTTAAGGGTCCAATGAAATTGAAA Sequence 55

TAGCAGGAGCCCAGGAGTCTGAGCGGNGGGACCCTCATGTCCATGCCTGTTGTCCCTGG ACNTGAAGACCTGAACTCCCCCGCGTACTCTCGGCCCGNTTCTTAGGAACNTAGGTGGG ATTCCCCGGGCCTGCTAGGGGAATTTCCGAATATTCAAAGGCTTAATTCGAATACCCCG GTCCGAACNCTTCGNAGGGGGGGGGGGCCCCCGNNTTACCCCAAGC

Sequence 56

GCGCCGAAGAGCACCGAGATGAAGGTGAAGATGCTGAGCCGGAATCCGGACAATTATGT CCGCGAAACCAAGTTGGACTTACAGAGAGTTCCAAGAAACTATGATCCTGCTTTACATCC TTTTGAGGTCCCACGAGAATATATAAGAGCTTTAAATGCTACCAAACTGGAACGAGTATT TGCAAAACCATTCCTTGCTTCGCTGGATGGTCACCGTGATGGAGTCAATTGCTTGGCAAA GCATCCAGAGAAGCTGGCTACTGTCCTTTCTGGGGCGTGTGATGGAGAGGTTAGAATTTG GAATCTAACTCAGCGGAATTGTATCCGTACCT

Sequence 57

CAGGGAATGGGNGGCTNCACCTGGGGANNCCTGAGGCCCGTGTTTGTGGAAGATGTA GATTCCTTCATGAAACAGNCTGGNAATGACGACTGCNGATACAGTATTAAAGAAGACTGG ATGAACAGTACCT

Sequence 58

CGGCCGCGGGCAGGTACGCGGGCTATTGTGATTCCCAGTGACCCATAGAACAGGATTTC
ACTAGTCCTATGACATGTGACTGGGCTTGGGAAGTTCNCGTGTCAGNTCCAAAAATCCTA
AGGTGGGATCTTCGCTTTGTGAAGCAAATTAATTACACAACCAAATATTGCCACATTCT

GAGTGAAAAGTGGTCCACGTAGAGCACAATATAATTTAAGTAAAGGAAGATTAAAACATA
TTTTTATCCATTTCTTATGGTGGNNNNATTACATGTTTTAGATTTGAGGTCCCCCTCTC

TCAAATATTTTACCAAAAATTCTCANGCNCCTGTTTACCAGGATGGTGGTATCACNATC

GGGCTCAAACCAAAGNTTACAGGAAATTCTNTTGGNGGGTTTTTTATCCTGGGACNATTC
TAAATTTTAAAAAAACCTAAAAAAGGTTATTTATTTCTTCNCNAATTTATTCANNTGNTTT
TTTAAA

Sequence 59

GATCTAGTTTGTCCCTCTCATTTTGCAGGCAAAGAATTGAATTCTAGAGAGGTTAATTG

Sequence 60

ACATCCTTTTGAGGTCCCACGAGAATATATAAGAGCTTTAAATGCTACCAAACTGGAACG AGTATTTGCAAAACCATTCCTTGCTTCGCTGGATGGTCACCGNGATGGAGTCAATTGCTT GGCAAAGCATCCAGAGAAGCTGGCTACTGTCCTTTCTGGGGCGTGTGATGGAGAGGTTAG AATTTGGAATCTAACTCAGCGGAATTGTATCCGTACCT

Sequence 61

TCCACTCCGCGGTGGCGGCCGAGGTACACGTTACTGTTCCGTCGTATTTTGTAGTCTCT GTTCTGCCCTTTGGAACATCTNTTCGGTGTTCCTGTGGGATCTCTCTACTGCATTNTA CT

Sequence 62

Sequence 63

TGAGTGAGCCTAACTCACATTTAATTTGCGTTTGGCGCCTCACTGCCCGCTTTTCCAG

Sequence 64

GGGCGNTGGGCTGGAGGAGGGGGCGCCNCCCCAGCAGA

Sequence 65

ACCTTTTTTTTTTTTTTTTTGGAGGAGATGGACAGTGTCAGTCTCCTGATANGGNGG

Т

GATGGGTAGGTAATTTAAAAGCTTCTATTATAAAATCTAGTCTCTCTGACACTGCCCTG

CCACTGCAGTCACCTCCCCAATACTGAAGGATCCTGAGAATACCGAGCNGGTCATGACA CTTACTCACGTCATTCACCANTTTTTTTGNACCTGCCCG

Sequence 66

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AAAATTCAGATCTTGACTGTTTTCTGGGGATAAAGCANGGCTTTACAATTTAGCAGTNTG NAGCTAGCTTGAAACAGTAAAACAACAACAGCAGAGCCTTAAGTGTATTTTTGTGACCTA AAACATGAACTCAGGGTTTCCAAAATTCCTAACAA

Sequence 67

AGGTACTTGAAGGATAAGAAATTACTGTGTCAAATTACCCACAAGTTAAATGCCCATGTT CCAGACCTGTGGCTCTTAGTATCAGGCTTGTGATAGAGAAAAGGCTGCTATGAATTCTAC TCAGTGTGCTTAGACCAAAGGAAACCACCACAGGGATTTCACAGGC

Sequence 68

GGATAAGAAATTACTGTGTCAAATTACCCACAAGTTNTTTGCCCATGTTCCAGACCTGTG GCTCTTAGTATCAGGCTTGNGATAGAGAAAAGGCTGCTATGAATTCTACTCAGTGTGCTT AGACCAAAGGAAACCACCACAGGGATTTCACAGGC

Sequence 69

GCGATTGGAGCTCCCGCGGTGGCGGCCGAGGTACCCATTTCATCTTGCACCCGCAATAC
CAGGGATTGTTGCGAAGAATCAGTTGTGTTATATTGTCCAAATCATCAAAGATACCCTGA
GGTAAATTACTTAGGTTATTATTGGACATATCCAGTCGATAGAGCTGCCTTAGATAAGAA
AAAGCATTTGGGGGCACCCGATTGATGTGGTTATCTTGAAGATAAAGCTTCCTCAGGTTT
GTGCCTGGAAGGTTTACTGGTGCAGCAGTCAGGGAATTCCGCACCAGGGACAGCTCTGTC
AAATTAACTAGGTTGAAGAAAACTTTGTCACCTAAACCATGATTGTTCAACAGGTTTCCA
TCTAGAACCAGGCGTTTTAGACTAGTGAGACCTTGAAGAGATGGTGATGAAATAGTGGAT
ATGCGATTATCATCCAAGCGTAGTTCTTCTATAGTCCTGGGCAAACCCCAGGGAATTGTG
CTAAGGTGATTACGGGACAGGAAAAGCAGTCGGAGATAGTTGCTGTCTCCGGAATGCTCCC
TCTTNTATGCTAACTGCAGAGACAGAGTTGNCATCTAAATGTAATTCTTCCAGATAGG
Sequence 70

NATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTGAATAAAAGGCTTTGGTTTCTCTG
ATGTCTTCCAATCAATCACACAGAGCTTGCCCTGATACTCAGCCACACAGTCCAGCAGAC
CTATATAGTTTAAGGTTTCATGTTGAACAGCACTTTCAAGAGCTCGCACTCCACTGAC
AT

CTTTCAGAATATGCTGGACACTTTCAATGTAACCAGACTTGAGGAGATTTTCATCTCTC

CTTTTAAGGTTTCCTGGGGTGAAAGTATGCTTTCCAAGGCTTCGTGGAACCGTTTCCC

GTAAAAAGACGTTTGAAGTGTATTCTTTAAAGCCATCTTCTCCCAGTTCCAGAATCATC

С

CGCTGTTTCCACCTCTCCAACAAGAAACCTGTTGTTTTGGTCATGGTCTGCTGAAGGA CTCGGGTCACACTTGGTATCACATTCCTTTGCAAGGGGATTTTCAAA

Sequence 71

AGGTACTTGAAGGATAAGAAATTACTGTGTCAAATTACCCACAAGTTAAATGCCCATGTT CCAGACCTGTGGCTCTTAGTATCAGGCTTGTGATAGAGAAAAGGCTGCTATGAATTCTAC TCAGTGTGCTTAGACCAAAGGAAACCACCACAGGGATTTCACAGGC

Sequence 72

GCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACATATATCATTTATTCAAGAGGCAGA TTTTAAACGTTTTTGTAAAAAGCTAAATAACACCCAGAGTGACTCAAAAAATTTCTCAA

TCTCTGCCGCCCAGGCTGGAGTGCAGTGGCGATCTTGGCTCACTGCAACCCCTGCCCG
Sequence 73

Sequence 74

ATAATTGGGGGCCCTACCCCAAAATGGATTCTTCTCCCCTACAGGTGGAGGGTTTCATTT

Sequence 75

GCGGCCGAGGTACGCGGGGAGGCGTTGTGGGAGGAGGTGCGGGGAGAGAGGAGGGCCT GTGCACTGAGCNGGCATCAAACTATTAGTGGATGGCCTTGCGTCTCAATCTGCAGTAAAN AGGAAACTAATCTGAAAGGGAANGANAGGACTGTGTGNCTTTTTATTTTTTAAAATACGG AGTGTGCANTTTTACTGAATCTTGAATCATGCCC

Sequence 76

TTANCCCCTTTTTTTTCTAAAGNATTGGGCCAAAGNNTTNTCTTCCNTTTNTTTTNCCA

CCNATTTTNAANGGGGGCCTTGGGGTTTTNGNGTTNTTCAANAANAACNTTTTTTTTTGN

GGGGTAAGTCCCNACCCGNGNTANCNTTGGGTNCAAGNTTTCNNTTTCTTTGGGGGGGGA AAAGGCTTGGNGGTTTCCAANGTCCNTCCAATTNTCCTTGGGCCAAANGGGGGGCCTTTT NCCTTCCCCTTCCCCTTNCTTTGGTNNCTTTTT

Sequence 77

AAAAAGNGAATTCCANCNTGGGGGGNCTTGGNGAAAAAGCCTTCTTAAACCANGGGCCAA
TTTGGCNCAGGCCCCTAAAGCCTTACCCTGGCCAAGTTTTTTGAAGAGCCAAAGGGGGGC
CAAGNGGGTTCAACCTTTTAACCCCCTTGCTTGGTTCTTGGAAATTGGTCNTCCCCTTGG
GGGGAACCAAAACAAGGGNAGGGGGCNTGGCCACCTTCAACTTGGGCCTTGGAGGTTCCA
AGAACCAGGAAAAGGAAGGGGGGAATCCATTCCGGGGACCTTGGGAAAAGNCCTCCTTGGG
CCAAGGGGGTAATTGGGGCTTAAGGCCCCNTGGGGTTTNACCCCCGGTTAAGTTGGAAGAA
AAATTNGGGAAGNAAGGGGGGCCCCAACCCTTGGCCCCCAAGCCNTTAACCACCAAGGAA
ATGGTTTTTTTCCCCCAAGGGGAACAAACCAAAGGGGAAGGGCCTTTGGTTGTTTCCCC
ACCTTTGGNACCAAGGTTTTTCAAGNACCAAGGGAAAAGGTTGGGGGAAAACCCCCAACCT
TGGGGGNACCCCCGGGGAAAAGNCCTTCNTTANNCCAAAGGNTGGGTTTTGGCCCCCCAA
CCCCTTGGGGGCCTTAANCTTTANAANTTTGGGAAGGCCCCTTTTTTGGAAANAACCCCAG
GCCCGGAAAAAAACCCAAAATTTAAAAATTTCAAAAAAGGGAAAGGCCAAGNTTTTCNTT
GGTNCCCNAANAAGGN

Sequence 78

TCCCTTTAAGTGAGGGGTTAATTGCGCCGCTTGGGCCGTAATCATGGTCATTAGCCTGGN
TTCCTGTGTGGAAATTGTTANTCNCGCCTCACAAATTTNCAACACCAACCATTACGGAAG
GCCCGGGAAAGNCATTAAAAGTTGGTAAAAAGCCCTNGGGGGGTGCCTAAATGGAAGNTG
GAGCCTAANCTTCAACATTTTAAATTTNGCGGTTTGCCGCCTTCACCTGGNACCCGGCTT
TTTTCCAANTTCCGGGGGAAAACCCCTTGTTCCGGTNGCCCANCCTTGNCCATTTTAAAT
GGAAAATCGGGCTCCAAACGNCCCCGGGGNGNAGAAGGGCCNGGTTTTTGGCCGGTTATT
TTGGGGGCCNGCCNTTCTTTTNCCGGCNTT

Sequence 79

Sequence 80

TGGCGGCGATTACTGTGCGAGAGGTAAAGGATATATGTGGCTACGATTACGGCCTCTCT Sequence 81

GCGGTGGCGGCCGAGGTACAGCCAACCCCCTAGGTGTGGACCAGCTGAGGCACGGTGGGC ATGATATGCAGAGGGACTTGGGGCTTTGCCAAAGGGTAAGCACAAAGAAGGAGTCACGGG TTCTGTTCGAGGCACTGTTGGGATTAGGAGCCGGAGGGGACCTACTTTTGCAGGAACCTA

GCATAACTTTGTGTGACGAGACTGCACAAGACAAAGCTCANGCAAGTGGCTCAGTAGTTG GCCAGCCCAGCAGGGTCCTCTGTATGAGTGTGCACCCAGCTGAAGAAAAGAAAATGGAGAG CAGCAATTGGAGCTTNAGGACCGGCTTGCACTGTGGCTCCAGGTTATACCACCACTGCCC AAAGCAAAAGCTAGAGAAGCAAGTGGAGAAATGCTGGAGAAAGCTG

Sequence 82

TGGCGGCCGAGGTACGCGGGGGAGTCAGTCTCAGTCAGGACACAGCATGGG Sequence 83

CGAGGACCTTGTTGCAGCTCTTTATTTCTTAAGTCCCCTCCCCGAGGTAACACATTT

GCTTTTTTAGCTGTTTCCTCTAGTGTAGGTTCACCTNGCTAATTTTTGATTCAATCACT

AACCACCGTTACATACTACAAAATATCACTATATTATGACCATGATTATATTTTNTTTTC
TTTTTCCCTTCATCAAGGAAGTTCATCAAAGAATTTCATCAAAGTTCAATGATGACCTC

TTTTAAAATTTTCTTAGTATTCTATGTAACTATCACCGATCTTTTCCCCACACACTTCAA GAGGCTTTTTTAAANATAATNTTTTACATAGGCCNTTGAGGCACANGATTAACCAAATCC CTNTTTT

Sequence 84

GTGGCGCCGANGNACTNNGGCCTATNTGNGANANAAGGTATTNACCNNGNNCACAACAA
ANGCATNNTCCATATTNNAACNGCTCATCATATGGNGNNAANATNNNGACAGANGGTGCA
ANCACNNTNCACTNGATATACNCCTTGGTNCCTCCGGCCGCTCTAGAANCTNANTGGGAT
CCCCCCGGGGCCTGCAAGGGAAANTTTTCGAATAATCAAAAGCCTTTATTCGGAATAAC
CCCGNTGCNGACCCCTTNCGAAGTGGGGGGGGGGCNCCCCGGGTAAACCCCCCAAGACCT
NTTTATGGTTTTCNCCCTTTTTTAAAGATTGNAAGNGGGGTTNTAAAATNTAGGCCNG
CC

CGCCTTTTGGGNCNGNTTAAAATTNCAATNNGNGTTACAATTAAAGNCCTTGGGTTTT

Sequence 85

CCGCGGTGGCGGCCGAGGTACTTATATTACATTATGCTCAAATGCAAACACTTATGCTAA ATGTTATATTTGGGAACAAATTGTGTAAATATACTGATGACGTCAATGGATCATTACAA

Sequence 86

AGCTTTTACCAGGGCCAGGCCAGGCCTCCCCCATGCAGAAGATCTTCATTGGCTGCATT CACCACAGCATCAACAGCATGTGTGGTGAGGTCATCTTTCCACACTGATAACTCTATCCT AGGAGTCAGCATTTTTCTGAACACTTGCAGAGATTTGCTGTTGCCTTCCTGAACTGGAGA GACCAGGGTAGAGATACAGCCAAACTTATTCTGGAGGACTTCACACAGCTGACGCTCATT ATTTTTTAAAATTTTAGAAGTCATTGGTGGTTAATGG

Sequence 87

CGGTGGCGGCCGAGGTACTCTTCAAAATTGTCAAGGTCATGAAAGACAGCAAAAAGTGAA

Sequence 88

GCCCANAAAACCGTAAAAAAGGCCGCCGTTGCTTGGCGTTTTTTTCCATTAGGGCTCCGCC CCCCTTGACCGAGCCATCACCAAAAAAATTCGACGCTCAAGGTCAAGAAGGGTTGGGCGG AAAACCCCCGACCAGGGAACNTATTAANAGAATACCCAAGGGCCGTTTTTCCCCCCCTGG GAAAGGCTTCCCCTCCGTGGCGCCTCTTCCTTGTTTTCCCCGAACCCCNTGGCCGCCTTT NACCCGGGNATTAACCCTTGTTCCCGCCCCTTTTTTCTTCCCCCNTTNCCGGGGGGA

Sequence 89

CGGGCAGGTACCGCTCAGCCTGCTTGGTTGCATCCTCCGCATGGCGAGTCAGCTCTGAGA
TCTGAAGGTCAGCATGCTTACGCTCGGCCTCACATGTGTCAAAGTGATTCTGGATCTCCT
TAAGTCGATCCAACATCTGCAGNTGCTGGTTTTCCCCCATTCTCCAGTTCACGTGTTAA
AT

TCTCTACTTGTGATGCCAAATGTGCTTTCTNCTTGTCTTTCTTTCCATGCACCGTTTN

CTTCCTTTAACT

Sequence 90

AAAGTGCCTCCCAGTAGGAAGAACAGTCACAAGGCACTGTTATATCAATTCAGTGTGACA CAAGCCCTGATTATTTAATAGTATAACAGCAGTGAATCAGAGTTCTTTCATCTGACTTT

CTGACATTNCCAGCAGCTGNATATTTAATTCACAGTTAGGGGCTGGACAAACTACAGCCN TTGATCAGAATGGAAGCAGGCATCCTTGAGCTTCTTCTAGGAACAAATACAGATGTGCAC AAAATTTTCATTTATTCAGT

Sequence 91

GATTGGAGCTCCCGCGGTGGCGGCCGAGGTACGCGGGATCACAAAGCAGACAAACAGGA AAGACTGAACCATCTATTTGAAAAAAGTGACTTCATTCAATTGGTTCAGCCACCCGTATC TGTAATCTCTCCATTCTGCCCTCTTGATTTTAATGCAGCTATAAAGGAGAGTATTTTAA

AGTGCCTCCCAGTAGGAAGAACAGTCACAAGGCACTGTTATATCAATTCAGTGTGACACA AGCCCTGATTATTTAATAGTATAACAGCAGTGAATCAGAGTTCTTTCATCTGACTTTGC

GACATTTCCAGCAGCTGTATATTTAATTCACAGTTAGGGGCTGAACAAACTACAGCCATT GATCAGAATGTAAGCAGGCATCCTTGAGCTTCTTCTAGGAACAAATACAGATGTG Sequence 92

CCCCANGAGGNCACCAAGCATCCCANCACCCTTNNTCCGGGNGGTGNAAANCCCANGGCC GCCAGGCAANGGCACANCAAAANCCGGGCTGCGNCNNGAGCACNGGGCANCCCGAGAAAA CAAGGNCNCAACNACNGACNGGCNAAGAAGGGGCCNGCCCCNGGCCAACNNCACCANACA GNNNAGAGCAATCTTTTTTTNGGGGGNGGAGCACCGGGACCACCCCNGACAACAAAGGA CCCCGGCCGGGGGN

Sequence 93

WO 01/42467 PCT/US00/33312

## Table 1

CCCGCGGNGGCGGANATTGGGGGNGAAACCTNANANCANGGAANCTTTGCTTTNNGNCCA GATTANATTGGGGGGNCTTAAANCCCCAGCGGCNNNNGACAGNTAATACACCTCACGTTT TTNGNAACTGGGGGGGCAGNACCN

Sequence 94

TTTCCCGGGCAGGNACAGCTCCATGAGGTCACCAAGCATCCCATCACCCNTTNCCGGCAG TTGCATGGCAATGGCTGCCAGGCAATGGCACATCAAAATCCGGGCAGCGTCTTGAGCACT GTGCAATTGAGTCAACAAGGTCTCAACTACTGACTGGCTAAGATGGGGCCTGCCCTTGGC CAACTTCACCATACAGTTTAGAGCAATCTTTAAAGTGGNCTGAGCACCTGGACTATCATC TTGACTACAAAGTACCT

Sequence 95

Sequence 96

AGAAATGTCGCCAAACTGCCGTCTTCCCTCCTCGGCCGCTGCGACAAACACCCCCACAAAA TGGCGGCAGCGCCGTCGCCCTAGAATCCCCCGAGTCGCCTCCCCGCGTACCT Sequence 97

Sequence 98

GCTCCCGCGGTGGCGGCCGAGGTACCAGCAGAGATGGCTTCAAGATGATTTAGGACTTG GGTCAGTAGCACTTACTGATGTAGTGGTTTGATACACACTGATTACCTTCTTTTT

ATTCTCTGGCATTTCTCCTATATAACTAGCCACTTTTAAACAATATTTGTCGGCTCTTTTCTTCTCTCCTGCCTTGCCTAGATTTTCTTCTCTCC

TACTCCTGGCCTTTCCTTGGGAGAGTTCATAATTCACCTACTCCATCTAGATATTTGTG

TGTCCAAACACATCTCCACGTTAGGCTTCTATTTGTAGCATCAGACCCACACTTTCAA

GTCCACTAGATAGCCTCACTTGGATGCTCTGCAGGCCTAAATAACCTTTGCGGACAGATT
AACAGGGAAAAAATATTAATAGGAAAAAATATAGATTTTTATCTGATGGTAAT

Sequence 99

TGCGTTGCGCTCACTTGCCCGCTTTCCAGTCGGGGAAACCTNGTCGTGGCCCAGCCTGCA
TTANATTGAAATCGGCCAAACCGCCGCGGNGGAAGAGGGCCGGTTTTGCGGTAATTGGG
GCGCCTCTTTCCGCTTCACTGGACTCCGCCTTGCGGCTTCGGGTNCNGTT
TCCGGNCTTGGCCNGGCCGAAGGCCGGGTTANTTCAGGCCTCCACNTCAAAAAGGGCGGG
GTAAATNAACCGGGTTAATCCCACCANGAAATTCAGGGGGGGGAATNAACCGCCAGGGAAA
AANGAACCATTGTTTGAAGCCAAAAAAGNCCCANCCAAAAA

Sequence 100

TTCAAGAATATTTTCAGGTAAATTAAGAATTAATTTCTTCTAAGACTATCCAATGNGTCT CAATCTATTCCATAATATAATCAATGATAAAGATTCACATGTATCACCAAATTCGAGGC

Α

GCTTAGTTGAAAAAATTTGAAACAGCTTACTGAATTCCATTTGCTGATTCTGNGGGGGCT TCCCCAATGGCATGNGTGCTCCTTTGGATGCCTGCAGGGGTGGTCACTGCAAAGTCGTCA TNTGTGCCACTGGGAGTTGGGGAGGCGGCCTGCTGGGGTTCCCTGGGT

Sequence 101

GGCCGAGCCCAATTCTTGATTTCTTTCCATCCCAAACTCTTTAAACTCTTGACCTNTGC

ATTCANGTTGTGAACATGAAACTTGTCTATCACCAGCCTCTTCTCTGCATTCTCTTTCC

TCCTTGNGTACTGCTAAAACTTGNATGGNCTNTGAAGATACTGCTCTTNACNCCTCTGAA GGGGGCTTCCTNAGGGGAAGGTACCTCGGCNCGCTCTAGAACTAGTGGAATCCCCCGNGC TGCAGGAAAT

Sequence 102

Sequence 103

ATTGAGCTCCCGCGGTGGCGGCCGAGGTACTCCTTTCTTGTTTAAACGCCTCACCACTG
ACCACGGAACGTCTTGATAGAGCCATCTAGTAATTCTTAAGTCCTACCTCATCCAACCTT
GTTTTGACTCCTGCAGTGAGCACAGCTGCCCTCACCCTCCCCTCTCTATGCCCTCACCTT
TGCAGGAGACTCTCAATTTCTCAGTCCACATCAGCTCTNAGACCACCAAANGCAAGGGTT
N

Sequence 104

GGAGAAAATGCTGAAACTAGTGGCCACAGATGTCTTTAATTCCAAAAACC

Sequence 105

AGCTNCCGCGGTGGCGGCCGCCCGGGCAGGTACTTTCTAGGTATATCATGTGCCCTAATG
TGCTCCTAATATCATAAATGTTTACTTTCCGAAAAGTATTTCTGAAAGGGAGCATATTT
\*\*

GGAAAGTGCATAGGCTTGTAATCATACTTGTTTTCAAGTTTCAACTTTGCTATTCAACT

GAATAATCTTGTGCAAAACCTGAGCTGATTTTCTCATCTATAAAATGGAAACAATACTT

CTGTGATAATGGGTGCAAAACACAAGGTATACTGGTTTCTTTGCTCTGGATTCAAGTT

CTTCTTAGTTTCAAAATTTTAAAGGGAAACCAAAAATGTTTCATGGNCCNNNCTNGCNGG NANGGGANTTTTCCCNCNAAAAAAAAAAATCAACGGGGGGGGTTTTTNCCNNTGGGGANN CCCAAAAAGCCGNNTNTNGGCCANGTTTTTNNGNNNCTTTTTGTNAGGGGNTTTNGGGCC NCCCTGCTTTACCCCNTTTTTTANATAACNNCCCCCCCTTTTGGNNTNGGGGNGGGNNT TATATATNTTTNTGGGGGGGG

Sequence 106

GTAGTGGGCAGCGATNAGGGCTGGGGCTCTTTCCTGAGTTGTCAAGGTGAGAGATTGT GAAGAACTTGGCTTGCAGGGTTTGGGCATCAGCTGCCCATTGAGGGGCCGTTCATTGTCT т

## Table 1

CAAAGTGAATGTGGGGTGGTTTGATCTGCATGTGTCATTTGTATCCACACAAGTTAATTA TTCTGCTTTTGTTGTAGTACCTTGGTTGTGAAGCAGAAGCTACCAGGCGTNTATGTGCAA GCCATCTTATCGCTCTGCATTAAGTAAGATGAGGATTCACTCTTAATTTATGGGCACAT

TTAGTTCCTTCCACACAAATTTAAGGCCTTAACTCTTNATTTTTTCCTACANTGGNGGG

TTTGGAAGTAATATTCATACGGGCATGGGACCT

Sequence 107

CAGAGAAAGCTTGCCAACGGTGATAAGTAGGTTTGTCTAGCAGCACTGATGCGTCGTGGA AGTTGATGGTCATGAACATACAGTGTGATAACCTATCTGCCCTCTTGACCTTTTCTAGT

GTGCTATGTCATTTTGGTACTAAGGTAGGTGAATTTTCCAAGTGTTCTTGGAAATAAG

AACATCAAGAATAATGTAAAAGCCTCATATACAATAATGAATAATAAAGAATAATGTGAA GGCTTCATTCAAGGTTGGGGTTTGCCAGATACATTGCAACAAAATGACAGAGCAGCCAAG GTATTTAGGGATAGTGGCCAAAGTATTGTAATGATGGCTTATGGGAGTGTCAAGCTGGAT AAAAGAGTGAAAAATGGAAATAAAAAACTAATGGGATTGGTTCNANTCCGAAATAGGCAG CNCNGCCCCAATGGCNCCCATNGCCCCGGTTTNAAATTAGGGGG

Sequence 108

NCCGGAATGGAATTCTACATCAAGTGTCTGTGCCTCGCTGCTGAAGGATAACCCAGAGTG CAAGGTCATCTTTGTTGCTGAACAGGGCTGGACCTGTCGCACTTAAGCACACTTAAAGGA TTCTATTCTTCATTCAGGTCCCCCAGAGAAATTGGCTCCTTATTTTTCTTTACCTATTC

TAGACTTCCTTTTGTCTAGAGCCAGTTTTGCAAAGGGCACTTTTATCCATCTCAGTTAT

Sequence 109

TGTTTGTTTTAAATAAAGAGATTCAGCCAGTAATAATGGGAAGAGCTGCAAATGACTTCC CCAG

Sequence 110

GTGCTGCCTGCACTGTGACTAAGACTTTCTGGACTATCATCATGTTTAGGAGTTGATGAG ATTATAGTTTCATGTAAGTGTATCATTAGATGACAACTCTACATCTTTAGGCATGGAAA

AAAAATTTTCCTGGAAGAAAAAAAAGTGAACATCCAACCTCCATTTAAACAAATTNGAT TGTTTCTTTGCTATTAAGAAACTCGGTGCTCTTTCTCCCACTCTATTATATTGTCAAAAT ACATCTGGAGACACTTTATAAACTTTTTCTCCTTTAAATTACCTGGTTTATATATTATCT CCTGTAGCCTGCATAAACGATAAAGGGTTAAACATA

Sequence 111

GCNCGCGGGATTGGCCGACGCAGCCATGGTAGGTCCAGATCCCGTAGAAGGGAGCGGGGTCCCATAGGTTACGGCCGATTCCTGGAGCTTCTGGACTGAGGGCCGCGGTAAGCAGTGGTCTGGGCTCCCGC

Sequence 112

20

## Table 1

CGTGGCCGAGCGGTTTGCATCGCCGCTCGCGCAAGGCCATGAGGTTGGTCTGGGTGAAGA
ACGCATCGATGGCGGCACGGGCCTGTTCCGGCACGTAGACCTTGCCGTCACGCAGACGCT
CCAGCAATTCGCGCGATGGCAGGTCGATCAGCAGCAGCTCATCGGCTTCCTGCAAGACCC
AGTCAGGCAAGGTCTCGCGCACTTGCACGCCGGTGATGCCGGCACCTGGTCGTTGAGGC
TTTCCAGATGCTGGACGTTGACTGTGGTGAATACGTTGATGCCGGCAGAGAGCAATTCCT
GAATGTNTTGCCAGCGCTTTTCGTGGCGGATTGCCGGGGGGCGTTGCTGTGGGCCAGTTCG
TTCACCAGCACCAGTTTTGGGCTTG

Sequence 113

Sequence 114

TTAGGTTTGTCTACACAGTAGGAAACACCTGATTAAATAACAGCATGGAGCCAATCTTGA CAAAGAAATTGGCTGCATCCAATAGAATCCCAGGGCCGGTCGTGGTGGCTCATGCCTGTA ATCCCAACACTTTG

Sequence 115

GGCCGGAATCGTTGCACCAGACNAGGCCCCCAGGGCCCAGCTACTCGAAGAACAAGCCAA TGGATTGGAACGTCCTAGGACAGATGCCACGGCTTTGACCCAGGCTGGGGGTGCACGGAT CTCACTGGGGTTAGTTGGTCGGAGGGGGAAGCCCCATGGGTCCACCAGGATGAGGTGTTT AACTCTATCAGGGTACCT

Sequence 116

GGGGCTCGTCGGTGGCGGCCAGCGAATTGGTGACGACGCTGATCTTCACGTTGCGCCCGC GGATCTCGCGCATCACCTCCAGCCCCGTGGCACCCGGAATCAGGTAGGGCGAGACGATGG TCACTTCGGAACGCGCGCGCGCGCATCTGCTCGACCACGTTGTAGCGCACGCTGTCGACAT CCAGCAGCGGCACGCCGCCGTACGACGCGGTCTTGCCCGATCACGCGGTCAGGCGAATCG GCATACGCCTCGGCGGTGTCCAGATCAGGCCGAGCTTGCCGGCGTTTGAAGGTCTTCGA CCATCGGGCTGTAGCCGAGCAGGGTTCGTTTGGGGCGCCGGGCTTCGGCGGGGGCCGGGC GTTTGGTGTCGGGGGGCCCGGCGT

Sequence 117

GATGATGAGCTCCCGCGGTGGCGGCCGAGGTACTCTAATGGAGCCCTCAGGACTGTCTT
AAAAAGACAAAAATACCTCCTACAGTTGTTATCATCAACGTCAGTTGCTGGCTTTTCCT

AATTTGTCTTCTACCTCAGATCTAAACCATTTGATAACATTAGGGCAATATCATGGCAA

CGTGGCCCAGTAAAACCATAGCAAATGTTTTCTCCCTAGGACACTATCTGTTTTCACAGG AAAATTTTTCTCATAGAAAAACTGTAGGAAAAGCCATGGGATGAGCTGAGAAGACCAAAC CTATCTCTTGGAAAACAACAGTAGGGAGCGTNGGATTAGGAATGTCCTTGGTGCGTGAAA CAGGCAGACCAATCCTGAAACATCTTTCTCTGGGGACCGTAAGGCATGGAAAAATTTTCT ATTACACTTANGGAGGGCTTCTAGGGAAACAGGAAACCGACCAAAAATGGGAATGGGGCC TTAATTCATTTTTTT

Т

Sequence 118

CTCCCGCGGTGCCGCCGAGGTACGCGGGGAACCGAGCAGCAGCGGACGTGAGCGATAA

TGGCGGATATGGAGGATCTCTTCGGGAGCGACGCCGACAGCGAAGCTGAGCGTAAAGATT CTGATTCTGGATCTGACTCAGATTCTGATCAAGAGAATGCTGCCTCTGGCAGTAATGCCT CTGGAAGTGAAAGTGATCAGGATGAAAGAGGTGATTCAGGACAACCAAGTAATAAGGAAC TGTTTGGAGATGACAGTGAGGACGAGGGAGCTTCACATCATAGTGGTAGTGATAATCACT CTGAAAGATCAGACAATAGATCAGAAGCTTTGGAGCGTTCTGACCATGAGGGACAATGAC CCCTCAAGATGTTAGATCAGCACAGGTGGGATCAGAAAGCCCCTAATG

Sequence 119

GGTGGCGGCCGAGGTACCTGAACACCAGGCTCTTTACGGTCCCCTGGCCAGTGAAAGGGT CTAATATAAAACACCCGAGGCTGAAATAGCCCGCTGCTTGTGAGACCTTCCTCAAGCTC AATGACTACCTGCAGATAGAAACCATCCAGGCTTTGGAAGAACTTGCTGCAAAGAGAAGG CTAATGAGNTGCTGTGCCATTGTGTATGTCTGCAGATTTCCCCAGGGTTGGGATGGGTTC ATCCTACAACGGACAAGATGAAGTGGACATTAAGAGCAGAGCAGCATACAACGTAACTTT GCTGAATTTCATGGATCCTCAGAAAATGCCATACCTGAAAGAGGAACCTTATTTTGGCAT GGGGA

Sequence 120

GTGGCGGCCGAGGTACCCGAGCTACCAGGCTGTGGAATGAGACCGTGGAGCTTTTTCGTG CTAAGATGCCCGTTACGGAAACATCGCTGTCGTTTCAAGAGCTATGGGCATTGTTTCACA

Sequence 121

GCTCCCCGCGGTGGCGGCCGAGGTACAAGTTTATGTTTTCCTTGGTGTAAGGCTTTAACA GTTCCCACCTTTCAGCTGCCTGGGCATTGATTGCTCACCTACCACTATGACTAGATATGA TTCCATGTGCTTTTGACTAGATTCTTTGTCTCTTGTGTATGGAAAGTGAGACTTTAAGT

ATAGTTACTGCTGAGAGAATAGAAGACGTGACAACGTTTGCTTTCCCATTCAGTAGTCA
GCGGTTGAATGGAATTATCTTCGTTTTTTGGACTGACAGATTTGTTTTACAATTCAGCTA

TTTTCCCAAATCATAAAGGTTTTGGG

Sequence 122

CCCGCGGTGGCGGCCCGAGGTACACACTGGGATCTCCTTCACTCATTTTTTAACCCTGAC TGGGACACCAGAGACATGCTGCATCTTGTATTAGGTGTTTCATCTTGCAGAATGGCTGTG CTCCTGAAATATTTCCTGTGAAGAAAATTGTTACAATCCCATTACATCACTGGCTTTTA

TATTAAATTGGAATGTTGGCTGGAAACAATTTTAACCC

Sequence 123

GCGGTGGCGCCCCGGGCAGGTACGCGGGTGTGCAACCAGTAACCTGCTAT GGCCAATTGTGAAGAGATGGGAGTCTCCCCGTATTGCCCAGGCCGGTCTCAAACTCCTGG GCTCAAGCAATCTTCCCGCCCCACTTCCCGAAGCCCTAGGATTACGGGAGTGAGCCACCG CACCCAGCCAGAAAAACGTTTCAAATATTGGAAAACCTTACTTTTTTCAATGAGCATTT

TGCATCAAGGGGTAACAGGGACATTAGGCTTTTTTTCTCTTAGACTCCAAACAGTAAGGT CAGAATTTATCAAGACATTACATAGGAGTAAGGGCACAGCCAGGGGGGTGGTGGGGGGGAG GGACATTTTCCAGCA

Sequence 124

GCTCACCGCGTGGCGGCCCGAGAAATGTCGCCAAACTGCCGTCTTCCCTCCTCGGCCGC TGCGACAAACACCCCACAAAATGGCGGCAGCGCCGTCGCCCTAGAATCCCCCGAGTCGCC TCTCCCCGCGTACCT

Sequence 125

ATTCAACAAATATTTATGCATCAGCTACATGCCAGGATCTGTAATAGATTCTGGGTGTGC
AGTAGTGATTACTGCAGAATGCAGACATGGTCCCTGCATTCTTGAGAGGGAGACAGCAAC
CAAATAAACAATTACAAAAAAGTATGTAACTAATTAACAAGTGGGAGAAGGGAGTGGGAT
TACACAGCAGAAGTGGAAGGAAGGGCCCACTTAGAGTGGTCAAAGGCTTCTTGAAGGTAA
CATGTAAGCTGAGACCTGAAGAAGGATGCAAAAGGCCCAGCATGTAAGGAACAGAGAATA
AACATCCCAGAAATAGAAAATAACACACAAAAAACCTAAAGTCATTAAAGAACATGATCAT
CTTTCAAGAACTAACCCTTGAGATCAGAGTAGTTTGATTATAGAGGAAAAAGGGTGAGTGC
AATGGAAACGTTAAAAAATAGCCCAGATCACGTAGAGCTCTTTAGCCTTTTTGGTAGAAAAA
Sequence 126

Sequence 127

GTGAAAAACAAGAAAGCTGAGAGAAATCAACATGTTCCCAAGTGCTGTATGTGAACAAT
AAATCTGAGACATACCTCTAAGGCTTTTCCAGAGACAAGAAGCTCTCAACCTGTAAAGAA
TTCCTGGGACATGACTGAGAGCAATGAGAACTCCAGTGNCAGAAGGTTAGCAGATATAGT
GTAGAGCATACACAGATATACTATAGTTCATAACACTGGTGGCTTAGCTGTAAATCACAA
AATAGCACTGGAATTATCTAGTGATCATAGCACATAGTCCAAGAAGAAAAAATTTTGATC
TTGTCTTAAACTTTGTGGAGCCAGTGGTGAAATGAGTCACACAAAGATGCAACAATGATT
GAACCCAGNCCTCTTTAGACTAACATATTCTTGGCCATCACCNCCAATATTACAATAAAA
ATCAAGACCCATGAAGGAGCATACCTTTTTCTGNAAGNAAATATTGNTTACCTCAGCTCT
ATTGGTATTTGATGCAAAACACCCACATGCAATTTGGATCAATAAGACATGGGAAGGGGC
CAAAATGNNACTTCATGCTTAAGGAAAAAAAAAGGAGNGGGAAGGAGGNCACCAAAGCNGG
TNCNGNAATGGGTNAACTTGGGGCATTATANGGGGGNGCTTTAAAAATACCATTTT
Sequence 128

GCGATTGGAGCTCCCCGCGGTGGCGGCCGCTGTGAAACAATGCTCATAGCTCTTGAAACG ACAGCGATGTTTCCGTAACGGCATCTTAGCACGAAAAAGCTCCACGGTCTCATTCCACAG CCTGGTAGCTCGGTACCT

Sequence 129

GGCCCAGGGCTCCAGCTATGAGCTTCCATAACACCCCTAGTTTTCCTCACATTGCCCTCA
TAGTATATGGAATTTGTTCATTCAATTGCCTGGCTTCCAACAGATGCCAGCTCCAAGAAG
GCAGGAGCTGCTTCTGGGTATTGCTTGCCATCAAGGCCCTCACACCCAACCTAATGCCTG
GGCCAGAGGTAGGTGCTTAATAAAAAATTGTTTGAGGCCGGGGCGTGGTGGCTCACGGCT
ATAATCCCAGCACT

T

Sequence 130

GCCCAAGGGGGGCCAACCCACATTATTTGNNTGGGGCNNNCTGCCCNTTTTTNAAANNA

GAAAANCCTTNNCCCCCCTTTTTATNAAATAAACCCCCCCNNNGGGGNGNGGGGGGGG GGGNGTNATANNNGNANNNNGTCTCNTNTTTTNTCCTTTAATTCCNANAAATAAACTT GA CNTTCGCTTGNGCTTNGGNNGGTTTCGGGCTGCGGCGAAGCCGGTATTCAANCTCACTCA AAGGGCGGNTAATACCN Sequence 131 CCGCGGTGGCGGCCGGCCGGGCAGGTACCTATCTGCAGAACGGTCATTAGCAGTTTTTCC AAACAAGCGACTTTTAGCAAATTAACCGTTAATTTTAATGAGATTCAAAAGTTAATAGC C ATTCTTAACGTTTTATAATTAGAAGCTGTTATATAATTAGAGCTGGACACCCACATGGA G AAACTAATTTGACTGTGCTGCATTTGACTTCACTTTGGTAACAGGAAGCACTTTTTAGT TGTAGACCCTTGGGAGTTGTAGGGAGTTAAAGCTGATCATTATATACTATTATATACTT TAAAGTCACCACTTCCTCATTCTGGTCCCCAATAACCCTATAAGCCTCTCCCTTGGAGGT GACCTCTGCCCTGTGAAGGGTTGGGCTC Sequence 132 ATGTTCTGGGCGGCCAGCACAATCGCCGCCTTGCCGACGATGACATTGTTGGCCTTCAGC CCGTCAATATCGCCCTTGATGTCGATGTTCTGGCTCTCCTCATCATGGCTCAGCGCAATG GCGGCGTTCGCCTTGCCGGTCGCCTCCACGAGGAACAGGGCTGCGGCCGTCGACACATCG CTGGACGCGAGGGTCAGGTTGCCCTGAAGCAGCCCCTTCTTGTCCTGGGTGACATCACCG CGCAGCCGCGTGCCGCCGGCAATGAACTGGATATTGCTCAGGCGTTTTTCGTCCTTGTGC

Sequence 133
CGGTGGCGGCCGAGGTACGATAATTCATGCCAATTTCTTTGGGAATACTTGTTTCTGATA
TAATAGGTTACAAAGCAAAATTGAGATGATTTTTAAAATGCCATGCAGTTATTTTTCT

AGGGCAAGTTCCGTGGCAAGATCGGCCCGCACGCCGTCGAGGAACGCCAGACCG

AATAACATAAATTTTAAACAGAGACCTGAAAAAAACCCCAAAAGTATTAACCTTTAAATA CATAAACTCAATAGAAATAATTTAACTGCCTTCTCTTCACAAGAGGCAATCAGAAGGCAG GACTATAGTTTTCTGTGTTTCTTTTCCACAGGAGAGATAATTACATTTCTAGAGACCCA

AGAAACAATTCCATAGTTTTAATTTC

Sequence 134

TNGACTCCCGCGGTGGCGCCCCAAGTGTTGGGATTACAGGCATGAGCCACCACGACCG GCCCTGGGATTCTATTGGATGCAGCCAATTTCTTTGTCAAGATTGGCTCCATGCTGTT AT

TTGATCGTCTTATTTATCTGGATTGGCCATACACAGTAATCTCACTAGCTGACAGTTGC

TCCCGCGTACCT

Sequence 135

TTGAGCTCCCGCGGTGGCGGCCGAGGTACCTCTCCTGCAGGGCCCTCCATTCAGGGTCT TCCTGGAAAACCCCCTGGAGGAAGCGCTCCTGTTGCAGTCGGAGTGAACACCCGTCTTGT TTAACCACCAGCAGGGGGATTCCTTTCTGGAGAGTCCATGTAGTCATCATCTCTTTGACC TCTGCATTTTCCCCCAGAAAGGCGAGCATGTTACTTGTCATCTTGGGATCCGAATGACAA

ACTCCACCAGATGTAAAATCACTTTCTAAACAACTATTTGACAGACTGCTCCACAAGTCA TCATTCTTAGCATTTCTATAGCTGAACTTCTTTAAGTACCTGCC CG Sequence 136 AGCTNCCGCGGTGGCGGCCGAGGTACTTAAAAGTATATCANGGGCAGTTTCATGCCACGG GAGCCAGGGAAGGCACCCAAGGAAGTGATGGAAGATTCACCAGGTGCAGCTCA GGAAAGGGCTCAGCAAATTTCTCTGTAACAGGATGCAGACCCCGCGTCCTGCCCG Sequence 137 GCCGAGGTACTAAATTTAGCAACTTTATTCATGAGGAACACCAGTCCAATGGTGGTGCTC TTGTCCTTCATGCTTACATGGATGAACTCTCATTTTTGTCTCCAATGGAGATGGAGAG AT TTTCTGAGGAGTTTCTTGCTTTGACATTCAGTGAAAATGAGAAAAATGCTGCTTACTAT G CTTTAGCAATAGTGCATGGAGCGGCTGCTTATCTCCCAGACTTCTTGGACTACTTTGC П ACCCCCATTTTAAATTTTTTNACCTCAGGGGAANNAGGGACNATCCTGGNTNGGGGNCC CNCACCGGNGGGGGNTCCNTTTTGGGGGGGAAAAAANATNTTTNTTGTGGNNCNNAANAAA С CCNCTTTTTTNAAAAAATTTT Sequence 138 TNCCGCGGTGGCGGCCGAGGTACTCGGGAGGCTGAGACAGGACAATTGCTTGAACCTAGG AGGTAGAGGTTGCAGTAAGCCAAGATCGTGCTACTACACTCCAGCCTGGGTGACAGAGTA AGACTCCATCTCAAAAAAAAAAAAAAAAAAATTGACTTTGGAACCTCAGATTACATATCAG TTTGCATACATGCTAAACAGAGAAATGTCCTCAAAATTCAGTTACTAAAAATTACTGAT TCTCCATGATTAGAACCACACTGTGGTTGTGTGTGTGTAGTCAAAGGAGGAGAATTTTTAAT TATTAGAGGAAGAATTTTTTTTCCTTGTAATTTCCAGGTGTTTATATTAGTTGGGCCAT Δ GTGAAAATTACATGGAGGAAAGAAAATAGGGAAAATAAGTCACAGAAAAAGAAAA Sequence 139 TTAAACTCTTGACCTCTGCAATTCAAGTTGTGAACATGAAACTTGTCTATCACCAGCCT TTCTCTGCATTCTCTTCCCTCCTTGTTATGCTAAAACTTGGATGGCCTCTGAAGATAC Т GCTCTTCACCCCTCTGAAGGGGGCTCCTCANGGGAAGGTACC Sequence 140 TCCCGCGGTGGCGCCGCTGTGAAACAATGCTCATAGCTCTTGAAACGACAGCGATGTT TCCGTAACGGCATCTTAGCACGAAAAAGCTCCACGGTCTCATTCCACAGCCTGGTAGCTC **GGTACC** T Sequence 141 TNCCGCGGTGGCGGCCGAGCCCATTCTTGATTTCTTTCNTCCCAAACTCTTTAAACTC GACCTCTGCAATTCAAGTTGTGAACATGAAACTTGTCTATCACCAGCCCCTTCTCTGCAT TCTCTTTCCCCCCTTGTTATGCTAAAACTTGGATGGCCTCTGAAGATACTGCTCTTCA CC

CCTCTGAAGGGGGCTCCTCAGGGGAAGGTACCT

Sequence 142

Sequence 143

Sequence 144

GAGCTCCCCGCGGTGGCGGCCGTTGCCCTTACATCTCTCATTTGGAACGTGACACGGTAT
TAAATAACGGCATATGAAAGCTTAAAAGTCATCAAATACAATCACTGGGTACTTTCGATT
ACCCAAACCAGGCACTTTCCTAAACTCCCCACTTCTTTACTTCTGCGGTCTCCTTTCTT

TATTCCCCCGCGTACCTGCCC

G

Sequence 145

ACTCCCGCGGTGGCGGCCGAGGTACCGAGCTCCNGGCTGTGGAATGAGACCGTGGAGCT TTTTCGTGCTAAGATGCCGTTACGGAAACATCGCTGTCGTTTCAAGAGCTATGAGCATTG TTTCACA

Sequence 146

CTCCCCGCGGTGGCGGCCGTTATGCTTAGCCNGTTTATTCTTTATTTTTTACTGGAG

ATTGCCAGTGATGGAAACGGTGTTTGCTTCTCTTTCAGTCAAGATCTGCACAAAGTATAG CATTAGGTGGTATTTATTGTTTATATTATGAGTTCTACATTCATCTTTCCAGCACTCTGA AGTTATCAGCAAGTTCTCAGTCAGTTCAAGGCATTGGATTCTGCTTGATTTCTTTTTAA

TCATTGTTTTTGACCCCTTTGAGAGTTTTAATAGAGAGGGAGTCTGGAAGGCAGAGATCTC CACCACCTAACCGTGAGAAATTTGGAACTAAGGACTTGCACTGGTCCCCAAGTTAACAGG GGATATACTTCCTGCATTTTCTCTGNTCTTTCTTGCC

Sequence 147

GGCTATACCAAGGTCTCATGGACTCTTGGACATAACCACCATTCTTTCCTNCCAACACCC CGGNGTACTTCAGAGTAAAACCCGGGAGCCTTCATGATAACCATGAAGGCCCGGAAGCTT CTGGCTTCCAAGGCTTTCTNTNGGCCTNACCTTCCGGTGGTTCCTTTTCT

Sequence 148

GGGTGGCGGCCGAGGTACCTNTGTGCGCGGTGGNCGAAAAAGCACCTGGGTCGGGTGCAG ACTGCGGAGCNGGGCCCTACCGTGTGCGCAGAAAGAGGAGGCGCTGGACTTATCCTACCT TAAGTTGAAGCAGACCAGCAATTGTTGTGACCTACAATCTCCACACCCATCTTTACTCTG AGCCAAGGAAGTGTCTGTTCTTGTGCTGAGTTTNAGGGGCCTTCAGCTNGNGGGAAATCC CNAAGA

Sequence 149

AGCTCCCGCGGTGGCGGCCGAGGTACCTTCCCCTGAGGAGCCCCCTTCAGAGGGGTGAA GAGCAGTATCTTCAGAGGCCATCCAAGTTTTAGCATAACAAGGAGGGAAAGAGAATGCAG AGAAGAGGCTGGTGATAGACAAGTTTCATGTTCACAACTTGAATTGCAGAGGTCAAGAGT TTAAAGAGTTTGGGATGGAAAGAAATCAAGAATTGGGCT

Sequence 150

CNCCGCGGTGGCGCCGCTGTGAAACAATGCTCATTGCTCTTGAAACGACAGCGATGTTTCCGTAACGGCATCTTAGCACGAAAAAAGCTCCACGGTCTCATTCCACAGCCTGGTAGCTCGGTAGCTCGGCCGCTCTAGAACTAGT

Sequence 151

GGTATGCCATTTCCAGAAAGTTGCAGATGAGCACCATTGGGCATTACCCAAATTCTGTCA CACATTGAGCAATGAAATTCAGGGAATTGGGACAATGACCTCTTGGGCATATGAAAGAAT TAAAAGAGGGCTAGGGCTTAGGGAGGGGGGATCTAATCGGGAGGGGATGTTCTGTCCCNA GCCCTTCCTTTCT

Sequence 152

Sequence 153

GCGGTGCCGCCGAGGTACACCTGCAACTGTGCGAATGGTCCTGTTGCCTCCTGCATTTT GGCCTCTGTTCTATAAAGGAAGAGTAAAGATGGAGCTCCTCCTGCCTCCATCACGAAAGC ACATATCATCTGTCCCTTTGGATTTTACTTCCAGGACGCGTGTCGTCCCCAGCGTGTG TT

GCCTTATGGTGCCGGCAGAGCCTCAGCTATCTGCCTGGGAAGTCGGATGTCCTTGGAGAG
AATTTGGAATGCAGATAATTTTCTTATTTCTTGAGAGCTTACTTTAATCAGCATGACA

TACCTAAACACTGAAGATGGCCTTATATTAGTAAGATTTGCACAAAATTAAGTATACCT

TGCAAACTATTACTTTGGTTTTTAGGAGTTTGATCAGATGAAGAAGTNATGGTATCACA

ATATATGTAAGAAGGCCAACCCATCATTATTTTTTGNAAGTGNTTTTTATTAAAAACC Sequence 154

CNCCGCGGTGGCGTNCGGCCCCCGCCTTTTCTGCGGCTTTCAGCTGCGCGTTTCAGGTCG
TCAATGAGGTCGTCGGCATCTTCGAGACCGATGGACAGGCGGATCGTGCCCTGGCTGATG
CCTGCGCCCGCCAGCGCTTCGTCGCTCATGCGAAATGCTGTGGTGCTGGCCGGGTGGAT
CACCAGGCTGCGGCAATCGCCCACGTTGGCCAGGTGGCTGAAGACCTTGAGGGTTTCAAT
GAACTTCTTGCCCTGCTCGCGGTTGCCCTTGAGGTCAAAGCT

Sequence 155

CGCGGTGGCGCCCCGGGCNGGTTATAAAAACGAACATGTATAAACGCTTACGCAAACC CTTTTTAATGTTCTGAAGTCAGTCTTTGTAAGTGAAATCGCTGGAGACTAGAAAGTATG

AATGGCAGTCTACCTGGGCAACCTACAAAAAATTTAGCTTGAAAAGACTTCAGTCTCCGC

TCCCCTGTTGATCTCATGGAGTGGGGAATGGGAATTGAACCAGAACTGGAAAATTATTTA GGAAAGTTTGTTAACTACTCTTTGTTGATCTCATGGAGTGGGGAATGGGAATTGAACCAG AACTGGAAAATTATTTGGGAAAGTTTATTAAC

Sequence 156

CTGGCGCCCCGNNCTGGTNCTTNCATCTNGGCTNCCTATANGCTNTCTTTTTTACAG
ACGCCATGAAATGCAATCCAGCTGAAGTATTATCATCTTGTAGCATTTCAAAAGGAACC
GTCGAAGTCATCCAAAGGATGGGAACCACAATGTTCTTGTTGTTCCTTGGGTTTCTTA
AT

GATTTCTGAATCATCATTATTAATTATGGAATTCTCTGGTCGAAAAGTCACATTTGGTT

TGAAGGGTGGTNCAAGCATCACCTTGGTTCNAATAAAATTAATGGTGTTAGGTTTCTGGT GGCCTTNGTTTAAAACGCAAATGGGGGTTTTTNANGGGGGGANAAGGTTGGGGT

Sequence 157

CCGCGTGGCGGCCGAGAAATGTCGCCAAACTGCCGTCTTCCCTCCGGCCGCTGCGACAAACACCCCACAAAATGGCGGCATGCGCCGTCGCCCTAGAATCCCCCGAGTCGCCTCTCCCCGCGTACCT

Sequence 158

CCCAGGGCCCAGCTACTCGAAGAACAGCCAATGGATTGGAACGTCCTAGGACAGATGCCA CGGCTTTGACCCAGGCTGGGGGTGCACAGGATCTCACTGGNGNTAGTTGGTCGGATGGGA AAGCCCCATGGGTCCACCAGGATGAGGTGTTTAACTNTATCAGGGNACCTTGCCCGCTCT AGAA

Sequence 159

CCCGCGGTGGCGGCCGGCCGGGCAGGTACACAGGACCAATGCTGCCCATCCCATGGAAT
TTACAAACATTCTACAGCGCAAAAGGCTCCAGACTTTGATGTCAGTGGATGATTCTGTGG
AGAGGCTGTATAACATGCTCGTGGAGACGGGGGAGCTGGAGAATACTTACATCATTTACA
CCGCCGACCATGGTTACCATATTGGGCAGTTTGGACTGGTCAAGGGGAAATCCATGCCAT
ATGACTTTGATATTCGTGTGCCTTTTTTTTATTCGTGGTCCAAGTGTAGAACCAGGATCA

TAGTCCCACAGATCGTTCTCAACATTGACTTGGCCCCCACGATCCTGGATATTGCTGGGC TCGACACACCTCCTGATGTGGACGGCAAGTCTGTCCTCAAACTTCTGGACCCAGAAAAGC CAGGTAACAGGTTTCGAACAAACAAGAAGGCC

Sequence 160

TGGCGCCCCGGGCAGGTACACAGGACCAATGCTGCCCATCCACATGGAATTTACAAA CATTCTACAGCGCAAAAGGCTCCAGACTTTGATGTCAGTGGATGATTCTGTGGAGAGGCT GTATAACATGCTCGTGGAGACGGGGGAGCTGGAGAATACTTACATCATTTACACCGCCGA CCATGGTTACCATATTGGGCAGTTTGGACTGGTCAAGGGGAAATCCATGCCATATGACTT TGATATTCGTGTGCCTTTTTTTATTCGTGGTCCAAGTGTAGAACCAGGATCAATAGTC CC

ACAGATCGTTCTCAACATTGACTTGGCCCCCACGATCCTGGATATTGCTGGGCTCGACAC ACCTCCTGATGTGGACGGCAAGTCTGTCCTCAAACTTCTGGACCCAGAAAAGCCAGGTAA CAGGTTTCGAACAAACAAGAAGGCCAAAA

Sequence 161

CGAGGTACCATCCTATTAATACTACTTCTGCTTCTACATACTGTAGACCTTTCTGGAT

ACCAAGAAGTTGACCTCATCACTGCTTATACTCATCTTTATTCCCACTTAAACCATGAG

G

TCCCAACACAGGATATAACCCATTGGGCAGTGCATTGATGTGGGGGATGTGCAACTGANT ATNCCGGTCACCGCCAATCACAAGTTTGCTGGTGTTGATGCTGGAAACGGTGGCCTCCA ACGCCGCTCCCCGGGAA

Sequence 162

GGCGGCCGAGGTACCTGGCCTGCCATAGTTCTTTGACCCGTTCATATTTGGGCAAGT GATTTGACTGTTGGATATTCTTGCTGGATTCCTCCTTCTTACGTAGAAATTTGCCTCTT

GCTTTTCTGGGTCCAGAAGTTTGAGGACAGACTTGCCGTCCACATCAGGAGGTGTGTCGA GCCCAGCAATATCCAGGATCGTGGGGGCCAAGTCAATGTTGAGAACGATCTGTGGGACTA TTGATCCTGGTTCTACACTTGGACCACGAATAAAAAAAAGGCACACGAATATCAAAGTCAT ATGGCATGGATTTCCCCTTGACCAGTCCAAACTGCCCAATATGGTAACCATGGTCGGCGG TGTA

Sequence 163

GGGGCCNCGCGTCCGGGTGGCTCTATGTAGTTCTAATTTGCATTTCTCTAATGACTAACG
ATGTTAAACATATTTTTATGTACTTGTTTCATGTACTTGTTGATATGTCTATTCAATTCC
TTTCACCATTTTTATGGAGCTGTTTTTTTATTATTGAGTTGTAGGATTTCTTTATATATG
CTGCATACCAGGCCTTTGTTATATACATGCTTTGCAATGTACATTGTCTTAAAATCTGT
G

GCTTGCCTGTTCAATTCATTAGTGGTGTTTTTGTTAAGCAGTTTTTAATTTTGATGAAGT G

Sequence 164

Sequence 165

NCCTGGCATCAGCNATTAGNAATCAACCTGTTAATCCAAGGTCTTTAGAAAACTTGAAA
TTATTCCTGCAAGCCAATTTTGTCCACGTGTTGAGATCATTGCTACAATGAAAAAAGAGG
GTGAGGAAAGAAGATGTCTGAATCCAAGAATCCGAAGGGCCGTCAAGAAATTTTACCTGA
AAGGCAGGTTAGGCAAGGGAAAAGGGGTCTAAAAAGATCTCCCTTAAAAACCAGGAGGG
GGAAGCCAAAAATCCGATGCCAAGTGCTTTCCCAAAGGGGATTGGGGACCACCACCAAGA
GGCCTTGCCCTTCTCCCATCACTTTCCCCTTACCATTGGGGAGGTAATTATTGTCAAA
GGCCATTAAATTTGGTTTCTTTAAGTTTTTGGCAGGTTTACCGCCTTAAAAAAAGGGTG
GA

CCCAAATGGATTGGGTCCACCCAAAATCNAGGCTTGCTTACTTACTTCCCTGGTAAGGGA

Sequence 166

Sequence 167

GCNGGCCGCCCGGGCAGGTACGCGGGAATGGGCACNNTGNAGCGCAAGTAGGTCTACAAG ACGCTACTTCCCCTATCATAGAAGAGCTTATCACCTTTCATGATCACGCCCTNGGGNATC ATTNTCCTTATCTGCTTCCTAGTCCTGGTATGCCCTTTTCCTNAACCACTCACAAACCA

AAACTTAACTAAATAACTTAACAATCCTNAGAACGCCTCAAGGNAAANTAAGAAAACCCG TCNTGAAACTTATTCCTGCCCGCCCATCATCCCTTAGNTCCCTCAATTCTGGNCCCT CN

CCAANCCCCTACCGCCAATCCCTTTTTACAATAAAACAGGACCGAAGGGTCCAAACNGAA TCCCCTCCCCNTTACCCATTCAAAAAATCAAAATTNGGCCCACCCAAATTGGANNACCTT GAAACCCCTAACCGAAGTTACCCTTCGGGCCCGCTTCTTAAGAAACTAAGGNGGGAATCC CCCCNGGGGCCTGGNAANGGAAATTTCGGATAATCAAAGCCTTAATTCCGAATANCCCG GTCCGAACCCTTCGGAGGGGGGGGGGGCCCCCGGGGTACCCCCANGCTTTTTGGGTTTCC CTTTTTA

Α

Sequence 168

ATNTTCAGGAGACGCTCNGTAGCCCTCGCGCTNTATCCTNCGGNACAGTTCTGCGGAAGA AGTGGCTCACGCCTTCCAGAGCCACATCATCGCGGNCGAAAGNGAAGCCCAGAGAGAGAGT AGGTGTAGGAGGCCTGCAGGTACCTCGGCCGCTCTAAGAACAANGNGGATCCCCCCGGGC TGCAAGGGAATTCCCTTANCAAAGCANTANTNAAACCCGTCCGNCCNNNCAGGGGGGGGG CCCCGNTACCCNAANCTTTTGNNNCCCNTNATAGAGAAGGGNGAAAAAATNANGCCCNCC TNGGGGCAGNAAAAAATGGGGACAATAAAGCTNTTNNNCNNGGGGGNTNAAAAANTTGT TAAATCCCCCNACCANNAATTTTCNCNAAACAAAAAAATAAAAAANCNCCGNGGANNGAN AAAAAAAANNGGNATAAAACACCCCNGGGGGNGGGTCCCCNCAAAGNGGGGGGGGGACCN CCNCCCNAACAATTAATGTGGGGNGGGNGGANANANAATNGCCCTNNTTTTTNTANNGNG CCCGGGGGNNAGNGNGNNNGNTTNACTTTANNNGGGCNANNTTTTTCCNCCTTATNNAA 

TTTTGAAGCCCNCTTNCCGCGGNGGCGGCCGCCCGGGCAGGTACTTCCACTATTATTGAA TGTATTCTGTATTATAATTGTATATTTGATTGCCTATCTCCCCTCAACTGCATTATACAT TTTCATGGGTGAGCCAATGTCTTTTTCACTCTATTTCAGTGCCCTGCACATTTTCTGGC

CATAGTAAGCATCCCATGAGTATCTGATGAATAAATGTATTTCCAAATTCAGGTTCAGT

TCCTTAATCTGAAAATACAAAATCCGAAATGCCATAAAATTCAAAGCTTTTTGAGGACTG ACCTCGTGCTCAAAGGAAATGCTCATTGGAGCATTTTGGACTTCAGATTTTCAGATTAGG GATATTCAACCCGTAAGAATAGTGCCAATATTCCAAAAATTCAAAAAAGTCTGAAATCCAA AACACTTCTGGTCCCAGGTATTTTGGATAAGGGATACTCAACCTGTACCGTAAAATACAT GCATACTTTCGATAGCACATGTGAAGGTATCTCTCTAAAATTGACCTCATTGGTTTCGT

CTCAAGCAAACTGACCTGGGGCCACTCAACATGGCTTTTATCGNGCCTGATGTTAATGCA TGTCTCTTTTTACAATA

Sequence 170

AAGTCTACATTTTATGTAGTGGTTAATGTTTGCTGTTCATTAGGATGGTTTCACAGTTA С

CATACAAATGTAGAAGCAACAGGTCCAAAAAGTAGGGCATGATTTTCTCCATGTAATCCA GGGAGAAAACAAGCCATGACCATTGTTGGTTGGGAGACTGAAGGTGATTGAAGGTTCACC ATCATCCTCACCAACTTTTGGGCCATAATTCACCCAACCCTTTGGTGGAGCCTGAAAAAA ATCTGGGCAGAATGTAGGACTTCTTTATTTTGTTTAAAGGGGTAACACAGAGTGCCCTTA 

ACAATGAGGAACATTTCATTTGACCCAACATCCTTTAGGAGCATAAATGTTGACACTAAG TTATCCCTTTTGTGCTAAAATGGACAGTATTGGCAAAATGATCCACAACTTCTTATTCT C

TGGCTCTATATTGCTTTGGAAACACTT

Sequence 171

TGAATTTTTTGGCAAATGTTTATGGTTTTACTTTCTTCATTAATCAAAAAANT Sequence 172

Sequence 173

GAACCCANCCCCCAAAAAGGGAAATTGGGTTGGGGGGTTNAAAAAAAATTGGGGAAAAA AAAAAATTTTTAANTTTTTAAGGGTTTTTCCAAACCTTTTTTCCCCCCCTTGGCCTTGGG C

CCCAANTTGGGAAAAAAANCCTTTTTTTGGGCCCCNTTTTTAAAAAGGNAAAAAGGGGGG TNGGGCCCTTGGGGGNAANTTTTTNCCCCCAAAAAGGGGGGTTTTTTTTGGGTTNAAAAA AAGGGGGGNCCAANTTCNTTCCGGGGGTTTAAAAAAAGGGAACCCTTGGGCTTTTTT TT

Sequence 174

GGCGAGCGGCCGGGCAGGTACCCTAGGGTGTTGTTTAAAGGACTTGATAACCAGCTT
GAAGAGGTTCCTACTGACCAGAAATGGAATGAAATTTAAGCATCAATAAGGGTAATAACT
GCAAGAGACTGACATCCACTATGGTTTAAATCCATGAGGTCACAATGATACTTAATTTT

CATTATTCTGAAAACCAGTAAATAAAGGCTAAGATTCAACAAGCATTTATCCAGCCTTTC
CTCAATGAAATATATCNTAAGAGAACCGAATAGTTAACATAGAGACATGGCCGGGCAAGG
TGGCTCTCGCCTGTAATCCCAACACTTTGGGAGGCCCGAGGTGGGAAGATTGCTTGAGCC

Sequence 175

CAGGACCAAAACCTGGGGATTAAGCTAAGAAGTCTGGTGGAGAGACTCTGTGGACGTAAA GAAGGGAATGAACACAGAGAAACTTTCAGCCAGATTCCTGATNGTCACCTGAACAAGAAA AGTCAAACTGGAGTGAAACCATGCAAATGCAGCGTGTGTGGGAAAGTCTTCCTCCCGTCA TTCATTCCTGGACAGGCACATGAGAGCTTCATGCTGGACACAAACCATCTGAGTGTTGGT GGGGAATGGANAGAGGACNCCCCCCGNAAACAGAAACCAACCATGGGGAAAAGCCTTCAT TTCCCCCAGTAGTNGGTGCACCGGCTCACCAGTTAACNACCAACTTNGAAAGGAGACCTT TATGAATTGCAAGGGTGGTGCGGGGAAAGCCCTTTAAATTCTCCCA

Sequence 176

Sequence 177

Sequence 178

GGTGGCGGCCGCCGGGCAGGTACCAAACCATTTTCACTAGTTCAGGATAGGAATATTCA
TCAGATTGTCTCTGTAAAAGTGAATCACAAAAAATTCCACCTGTGTAGGTGTGGGACTGGA
CAGCTGAGTGACAGGGCCCTGGGAAGAACAGAAACCACTTTTCCTCTTTCCTCTGAAATA
TCAGAAGTTAAAAATCTACTCTGAGTTATATGTGCATCAATTTTAGACATATTGCTGAT

TTATTATGAAAATGAAGTGCTAAAGACAAAGGATATTTCCATTCCTCTGGACAGGCAGCCACAGACCAGCACTGCTTGACCCATGTGTATACACATGTGTGCTTTGTACCT

Sequence 179

GGTACTCACAGTCACGCAAATTCACAGTCTGCGTGCACGGCTCTCCATTCTTCTTGG CTTTACAGGTTCCCAGGTCAAGAGCTTCACCCATAATTAAGACCTTCTGAGGATGATCGA TAGATAAACACACCTCCTCTGAACCATCCTTGGGCTTCATGGGGTTGGCATTGAGGATCC CTACGACAGTCCCCTGCTCCGTCTTCCAGAGCGCTTTGTGAACTTCTCCAAATAAGAACA AGGACACACATTGTGTCAGGTCACGAAGATCATTCAGTTTCCATATGCTGAAGGTTTTTC CACTATTCACACTCTGTGGCGTAACCTTCTTCAATATAACCCCCAAATGTCACCCAATCT

TTTCTTCCAGCTTCTCTGGCCATCTTTTCTTGATCTGAGACAGTCTGATCAGTTTTC

**GCCGCTCTAGAACTAG** 

Sequence 180

GGCGGCCGAAAACTGATCAGACTGTCTCAGATCAAGGAAAAGATGGCCAGAGAGAAGCTG
GAAGAAATACGATTGGGTGACATTTGGGGTTATATTGAAGAAGGTTACGCCACAGAGTGT
GAATAGTGGAAAAACCTTCAGCATATGGAAACTGAATGATCTTCGTGACCTGACACAATG
TGTGTCCTTGTTCTTATTTGGAGAAGTTCACAAAGCGCTCTGGAAGACGGAGCAGGGGAC
TGTCGTAGGGATCCTCAATGCCAACCCCATGAAGCCCAAGGATGGTTCAGAGGAGGTGTG
TTTATCTATCGATCATCCTCAGAAGGTCTTAATTATGGGTGAAGCTCTTGACCTGGGAAC
CTGTAAAGCCAAGAAGAAGAAGA

Sequence 181

GTGGCGGCCGAGGTACTACAGTCACGCTCCTCTGAACCATCCTTGGGCTTCATGGGGTTGGCATTGAGGATCCCTACGACAGTCCCCTGCTCCGTCTTCCAGAGCGCTTTGTGAACTTCT

CCAAATAAGAACAAGGACACACTTGTGTCAGGTCACGAAGATCATTCAGTTTCCATATG CTGAAGGTTTTTCCACTATTCACACTCTGTGGCGTAACCTTCTTCAATATAACCCCAAA

GTCACCCAATCTATTTCTTCCAGCTTCTCTCTGGCCATCTTTT

Sequence 182

### Sequence 184

## Sequence 185

CCGGNCGCCCGGCAGGTACGCGGGGGTGTCCGGCGATGGGCACGGGCATTTCTTCGTTTA
TAGCTGTCTGTTTGCATTCTGATTGGGAACACTGGGATCATTTTCATCATGCCGACAGTG
GTGGTAATGGATGTATCCCTTTCCATGACCCGACCTGTGTCTATTGAGGGGTCCGAGGAA
TACCAGCGAAGCACTAAGTAATATGGATGATTATGACAAAACCTGCTTGGAGTCTGCATT
AGTTGGTGTTTGCAATATCGTTCAGCAAGAATGGGGTGGACATTCTTGCCAGGTTGTC
CTGGTGACAGACGGNTGTCTGGCATTGNNAGAGGGCCACTGGGACATTCNNTANCCANTC
AAAATTAACNAAAGTGNGAGCACNNGGTTTCCCTACCTTTTCNTTTCCCATCAANTNT
AT

ATACCANGGNNGGGCGAATTTGGNGGGCCCCNCGCCCCTNTTCTTTGGGACTTTTAAAA CNGTTTGTCNTTTCCNCTTTGGGGNGNGGCCATTTTTATNTTGGGGGGNCCCCTTGGGGA ANAANAAACCCCCCNCCCCTTTANAAAANNGGNCCCCCCCCGNGNGGGGGGGNAATTAAA AAAAAATTTTNCCCCCCCCCCCCCGGG

## Sequence 186

TCCCGCGGTGCCGGCCGAGGTACTCACACGTCACCGCAAATTCACAGTCTGCGTGCACGG CTCTCCATTCTTCTTCGGCTTTACAGGTTCCCAGGTCAAGAGCTTCACCCATAATTA

GACCTTCTGAGGATGATCGATAGATAAACACACCTCCTCTGAACCATCCTTGGGCTTCAT GGGGTTGGCATTGAGGATCCCTACGACAGTCCCCTGCTCCGTCTTCCAGAGCGCTTTGTG AACTTCTCCAAATAAGAACAAGGACACACATTGTGTCAGGTCACGAAGATCATTCAGTTT CCATATGCTGAAGGTTTTTCCACTATTCACACTCTGTGGCGTAACCTTCTTCAATATAA

CCCAAATGTCACCCAATCTATTTCTTCCAGCTTCTCTCTGGCCATCTTTTCTTGATCTG

GACAGTCTGATCAGTTTTCGGCCGCTCTAGAACTAGGTGGATCCCCC

Sequence 187

Sequence 189

AGTGCACATTATTAGAAGAGAGCTTCAGATGAAAATAAAGATCAAGAAAAAGACTCTTGC TTTGAGAAAGACACAAAGAAATCACATCATTCTTATTGGGATTACTGGGCTAGCCATATG CCAGAAAAATGAAACTGGTCCCTTCTTACACCATATACCAAAAGCNGCCCANGATGGNTT ACTTNAATGTNAAANCCAAAACT

Sequence 190

CGGCCGCGGGCAGGTACCATCGCCGTCCCATTGCTCACAGGGACTGGGAAGGCGATGCC
TGGCGGGAGCTGCTGGTGGAGAGACTCGGGATGACTCCTGCTCAGATTCAGGCCTTGCTC
AGGAAAGGGGAAAAGTTTGGTCGAGGAGTGATAGCGGGACTCGTTGACATTGGGGAAACT
TTGCAATGCCCCGAAGACTTAACTCCCGATGAGGTTGTGGAACTAGAAAATCAAGCTGTA
CCCTGATGCTACAGACGAGGACATCACCTCACACATGGAAAGCGAGGAGTTGAATGGTGC
ATACAAGGCCATCCCCGTTGCCCAGGACCTGAACGCGCCTTCTGATTGGGACAGCCGTGG
GAAGGACAGTTATGAAACGAGTCAGCTGGATGACCAGAGTGCTGAAACCCACAGCCACAA
GCAGTCCAGGATTATATAAGCGGAAAGCCATGATGAGAGCAATGAGCATTCCCCATGTGAT
TGATAGTCAGGAACTTTCC

Sequence 191

CGCCGGCAGGTACTCCCTGGAAAGTCCAGCTGAGAAAGCGATCCTGCCCTCTGCTCCTC CCAGGGTTACCCTCCTGTAAGTCTTCTGCTTAGTGTTCAGAATTGGGGGATGCTGGGACT GGGCAAGGACTTGTAGGCAACACCCCATAGCCTGCTCATGCCTGTTGGGTTGCCTATGGA

TCATTCCCTGCTGGGCTCACTCACCGGCTTCGTATAAGGTCCTTTTTGAGGTTTATTA

TCCTTGTCCATATACTTGATGCTCTTCATTGGCTTGTCTGGGACCTGCCTTAGGTTCTCC

GAGGCATAAAAGGGCCGGACAGCCCCCGAGTTGGGGGAACTCTGAAGCTTCTTGGTGGCT GGAACCTTGGTCATCTTAAAAATCCTTCAGGTTTTAGCCTGTGCCCCCAAGACAAGGATT TTTCCAGAATCTTCTACTTCAAGTAGTTACTGGTATGAAGAAGTTTCGGCA

Sequence 192

GGCTTGAAATACAGCTGAAATAACTGAATTTTCTACTTGAAACGTGTGTGCCTCTCCACT GNGGGGCCAAGGCCCTGGAAATGTAAAGGGCCAATCTTTGTTACAGAGGGGTTCATTGCA GTGAAGGGCGGGTTCTGCAAAGACAAACAGGTCTCACAGATAGTTGCCCCCGCGTACCT Sequence 193

NGGCGGCCGAGGTACGCGGGGGGGCTGNAGTAGGCTTCGTCTTCGGNTTTTCTCTTCCTTC
GCTAACGCCTCCCGGCTCTCGTCAGCCTCCGCCGGC

Sequence 194

CGGCCGCAGCGCAGCTACAACAACCGCGTCGCTCTCCGCTCAATTTCCAAGAGCCAGCTTGAAGCCAAGTGCCCCCGCGTACCT

Sequence 195

Sequence 196

TGATGAATCACAATCACCATGGTCGCCGCCTGAGCGCCAACCCCTACCCCGTCGCCTCAT CGGATCCCCCCCGCGTACCTCGGCCGCTCTAGAACTAGTG

Sequence 197

NCGAGGTACCTGCCTNACAGNGCAGGGCGGTATGCCGCCAAACGCTTCCGCAAAGCTCAG TGTCCCATTGTGGAGCGCCTCACTAACTCCATGATGATGCA

Sequence 198

TTGCTCAGCCTTTCCAGGCCCCTCTGATGAGCTCTCTAATCAGCAGGACCAAGGTGTGAA
TGTGGGAATGAACATGGATCCATCCCATTGGATGGAGAAAAGGTGGACAGCCTGTTCG
TCTCTCATGTCAGCCTAGGGCTGGGAACAGTTTGTGAGGACTTATCTGTTGTACCT
Sequence 199

GGACTTGCTCAGCCTTTCCAGGCCCCTCTGATGAGCTCTCTAATCAGCAGGACCAAGGTG
TGAAGTGGAATGAACATGGATCCATCCCATTGGATGAGAAAGGTGGACAGCCTGT
TCGTCTCTCATGTCAGCCTAGGGCTGGGAACAGTTTGTGAGGACTTATCTGTTGTACC
T

Sequence 200

GANGAGAAGCTGGAAGAAATAGATTGGGTGACATTTGGGGTTATATTGAAGAAGGTTAC GCCACAGAGTGTGAATAGTGGAAAAACCTTCAGCATATGGAAACTGAATGATCTTCGTGA CCTGACACAATGTGTCCTTGTTCTTATTTGGAGAAGTTCACAAAGCGCTCTGGAAGAC

GGAGCAGGGGACTGTCGTAGGGATCCTCAATGCCAACCCCATGAAGCCCAAGGATGGTTC AGAGGAGCGTGACTGTGAGTACCT

Sequence 201

GCCGAGGTACTCGGGCAAAGAGGGTGACANGTTCAAGCTCAACAAGTCAGAACTAAAGGA GCTGCTGACCCGGGAGCTGCCCAGCTTCTTGGGGAAAAGGACAGATGAAGCTGCTTTCCA NAANCTGATGAGCAACTTGGACAGCAACAGGGACAACGAAGGTGGACTTTCCAAGAAGTA CCTGCCGGGCGGCCCGCTCTAGAACTAGT

Sequence 202

Sequence 203

GCGGCCGCCCGGGCAGGTACGCGGGGAAGTCTNTCCTTTCTCGTTCCCCGGCCATCTTAG CGGCTGCTGTTGGTTGGGGGCCGTCCCGCTCCTAAGGCAGGAAGATGGTGGCCGCAAAGA AGACGAAAAAGTCGCTGGAGTCGATCAACTCTAGGCTCCAACTCGTTATGAAAAGTGGGA AGTACC

Т

С

Sequence 204

CTCCCGCGGTGGCGGCCGAAAACTGATCAGACTGTCTCAGATCAAGGAAAAGATGGCCA GAGAGAGCTGGAAGAAATAGATTGGGTGACATTTGGGGTTATATTGAAGAAGGTTACGC CACAGAGTGTGAATAGTGGAAAAACCTTCAGCATATGGAAACTGAATGATCTTCGTGACC TGACACAATGTGTCCTTGTTCTTATTTGGAGAAGTTCACAAAGCGCTCTGGAAGACGG AGCAGGGGACTGTCGTAGGGATCCTCAATGCCAACCCCATGAAGCCCAAGGATGGTTCAG AGGAGGTGTTTTATCTATCGATCATCCTCAGAAGGTCTTAATTATGGGTGAAGCTCTTG ACCTGGGAACCTGTAAAGCCAAGAAGAAGAATGGAGAGCCGTGCACGCAGACTGTGAA Sequence 205

CNCCGCGGTGGCGGCCGAAAACTGATCAGACTGTCTCAGATCAAGGAAAAGATGGCCAGA
GAGAAGCTGGAAGAAATAGATTGGGTGACATTTGGGGTTATATTGAAGAAGGTTACGCCA
CAGAGTGTGAATAGTGGAAAAACCTTCAGCATATGGAAACTGAATGATCTTCGTGACCTG
ACACAATGTGTGTCCTTGTTCTTATTTGGAGAAGTTCACAAAGCGCTCTGGAAGACGGAG
CAGGGGACTGTCGTAGGGATCCTCAATGCCAACCCCATGAAGCCCAAGGATGGTTCAGAG
GAGGTGTGTTTATCTATCGATCATCCTCAGAAGGTCTTAATTATGGGTGAAGCTCTTGAC
CTGGGAACCTGTAAAGCCAAGAAGAAGAATGGAGAGCCGTGCACGCAGACTGTGAATTTG
CGTGACTGTGAGTACCT

Sequence 206

TCNCCGCGGTGGCGGCCGAGGTACTCACAGTCACGCTCCTCTGAACCATCCTTGGGCTTC ATGGGGTTGGCATTGAGGATCCCTACGACAGTCCCCTGCTCCGTCTTCCAGAGCGCTTTG TGAACTTCTCCAAATAAGAACAAGGACACACATTGTGTCAGGTCACGAAGATCATTCAGT TTCCATATGCTGAAGGTTTTTCCACTATTCACACTCTGTGGCGTAACCTTCTTCAATAT

ACCCCAAATGTCACCCAATCTATTTCTTCCAGCTTCTCTCTGGCCATCTTTTCCTTGAT

**TGAGACAGTCTGATCAGTTTT** Sequence 207 TCCCGCGGTGGCGCCCCCGGGCAGGTACATGGTTCTTCCTCAGAAAGTGGTTCTTCCT TAATGTGTTTCTTTTTACCCCTTTTCTTCTTCTTCTTCACAGATGNGGCTTCNTCTTCTG CCACTTTTCTTCTTCCTCTTCTAACTGAATAGGGTAAGTGTAAAGGCACAACAAAT AACACTGTATCAGATCTCATTCCTTCCAAAAACGTTTGAGTCCTAGTTTTTTTCTGTCA TCTCATCAACTACCCAATGTTTGTTTTGTTTATTTTATATTGGGAAGGTTCTCCAAGG C CTACCACTAACTTTAACGAATGATATAGATAGAGCTCAGAGCAATCTTCTCACGATCATG AAGTCATGTATAAAAATCAGGATTAAAACAAAGGTCATCTGATCTCCAATCATTATTGGG AAGGAAAGTCAATTATATTANGAAATGGTTAAGAGCTTGCACTCTGAAGTCAGACGGCCT GGGTTTAATCTACCTGCTGCACCCTGAAAAATTGGTATTTACCCTT Sequence 208 CGCGGTGGCGGCCGGGCCGGTACATGGTTCTTCCTCAGAAAGTGGTTCTTCCTTAA TGTGTTTCTTTACCCCTTTTCTTCTTCTTCTTCACAGATGTTTCTTCTTCTTCTGCCA CTITITCTTCTCCTCTTCAACTGAATAGGGTNAGTGTAAAGGCACAACAAATTAA ACTGTATCAGATCTCATTCCTTCCAAAAACGTTTGAGTCCTAGTTTTTTTCTGTCATTCT CATCAACTACCCAATGTTTGTTTTGTTTATTTTATAATTGGGAAGGTTCTCCAAGGCCT CCACTAACTTTAACGAATGATATAGATAGAGCTCAGAGCAATCTTCTCACGATCATGAAG TCATGTATAAAAATCAGGATTAAAACAAAGGTCATCTGATCTCCAATCATTATTGGGAAG AAAGTCAATTATATAGAAATGGTTAAGAGCTTGCACTCTGAAGTCAGACGGCCTGGGTT AAACTTAAGAATGTCTTATCTTACTGGACTGGTACTGGATTAAAAAGA Sequence 209 CACCGCGGCGCGGNCGAGGTACACGACATAGGCACATGTGCAAACACAAAGAAGGTGGG CATGCTGCTTCTTTCTNTCTGCCCCTAGNCCAGGCTCCTTTGCTTCACGNAAGATNNACA CTTTCCCATTCCTCTGAAGTTGCTGGAAGGACATTTCCCAGGAAGAACAATTCCTCACT GCCTATAAACTGTAGTCCCAATGTNGGGATAGTCAANNGAACATGAGAATCANAACCAAT CTGGGCAAATGGGGNATGGCAAGTAATGGGNGAACACGCACTAACAGGNACAGTATGCCC **AACCT** Sequence 210 GGTGGCGGCCCGAGGTACTCACAGTCACGCTCCTCTGAACCATCCTTGGGCTTCATGGGG TTGGCATTGAGGATCCCTACGACAGTCCCCTGCTCCGTCTTCCAGAGCGCNNTGTGAACT TCTCCAAATAAGAACAAGGACACACTTGTGTCAGGTCACGAAGATCATTCAGTTTCCAT ATGCTGAAGGTTTTTCCACTATTCACACTCTGTGGCGTAACCTTCTTCAATATAACCCC AATGTCACCCAATCTATTTCTTCCAGCTTCTCTGGCCATCTTTTNCTTTGATCTGAG CAAGTCTGATCAAGTTTTCGG Sequence 211 GCGGTGGCGCCCGAGGTACTCACAGTCACGCTCCTCTGAACCATCCTTGGGCTTCATGG

GGTTGGCATTGAGGATCCCTACGACAGTCCCCTGCTCCGTCTTCCAGAGCGCTTTGTGAA CTTCTCCAAATAAGAACAAGGACACACATTGTGTCAGGTCACGAAGATCATTCAGTTTCC ATATGCTGAAGGTTTTTCCACTATTCACACTCTGTGGCGTAACCTTCTTCAATATAACC

CAAATGTCACCCAATCTATTTCTTCCAGCTTCTCTCTGGCCATCTTTTCCTTGATCTGA G ACAAGTCTGATCAGTTTT Sequence 212 GGNGGCGGCCGGGCAGGTACTTTTNAAATTTTTTTTTTCTGNAGAGACGAGGTCT TTCTATGCTGTTCAGGCTGAACTTCATGGGTTTATTGGGGATGGCTAANGGATGACATTG GCTGGTGGTCCTTGATACCAGATAAGCCCTCAGTGTGAAGCAGCTCTTATTTTTCCTT GT CTTGAGATTGCTCTTGGAATGGAAATTAGGCTTTTTTGAAGGTGTCGACCCTTTTTGG TT CATTTCTTCAGCAGTTACTTTTTATTTTTTTAAAATGTTTTGACACACAAGTCTTNTGG ATAAATGAATCANTTCACCCAANCACCCCGGATTTACTTCTCCTTTGCTCTGGNTNAA GT NGNTGAACACNTGTCCCCTTTTGAAGAAATCTGGGNCGACAGCTTATGTATCCCCATTCA CCCACAACACCCCCAAAAAAAAAAAAAAATTTATTGTCTTGGGGTTCCCCAGGGGAGNTT ACCCTTTTTAATGGAAGAAAGGTNCCATTCTTGNGGAAAGAACCCCTNGGGAATGNTTTC AANAAGGAAACCTTTCCCTGGGGGAAAAACAACTTGNAAAAGGAAAAAATTAAAAGGAAG GGCCCGGGGCCC Sequence 213 GCGGNGGCGGCCGTTTGAGAAGCCAGCGCTCACCCACCCGGGGTCTCTGTGCATTGACCT TTGGGTGCTGACTTGGAGAAAAGCACAAACACGACCAGTCCCCCCGCGTACCTCGGNG Sequence 214 TCCCGCGGTGGCGGCCGAGGTACATGCCTACAGATAGTCCCAGCTACTCGGGAGGCTGA GGCAGGAGAATCGCTTGAACCCAAGAGGCGTAAGTTGCAGTGAGCCGAGATCATGGCACT AAAAAGAAACAGATGAAACCAATGTGAATAATTTATTTTAACACAATATACCTAACATAT TTTTATTTCAATATCTAACCAGTATAAAAATTTACTTGTTTTGCCCTCTAGAGATAGTAA GCTCCTTAAGTAAACAGAAGTAATACCTGATTAATTAGAATTCCCAACCCTCATCAAGTG G CTTGGATGAGAGTGAGGAAAAAGGTATTAAGTATTGGCTTT Sequence 215 GNGGCGGCCGAGGTACTTTGGAGTCCCCTGGTTTCTCAAGAATTGCCGTTGACTCTTTCT TTGGCTTCTGCTGGCACGGTAACCAGACTCCCTACAACTGCACTCTTTGTCTTTGTCA TG GAAGCCGCGAGCGTAGAGGTTCCGCGTGCTCTGCCGGACTTGAGCAGGTCACTGGGTCCT TTACACTTGTGAATTCGAAGCTTGCCAGATGTATCCTCAATGCATTGCCACTTCTGCC CC GGTTGTTCACAGGCTGTCTGGTACGAGATCTCCGACCAGTCTGGGGGGCGCTGGCGGCCTG CGCAGCCACCTCAAGATCACAGATTCTGCTGGCCATATTCTCTACTCCAAAGAGGATGCA ACCAAGGGGAAATTTGCCTTTACCACTGAAGATTATGACATGTTTGAAGTGTGTTTTGAG AGCAAGGGAACAGGGCGGATACCTGACCAACTCGTGATCCTAGACATGAAGCATGGAGTG

Sequence 216

CCGCGGNGGCGGCCGAGGTACTTTGGAGTCCCCTGGTTTCTCAAGAATTGCCGTTGACTC TTTCTTTGGCTTCTGCTGGCACGGTAACCAGACTCCCTACAACTGCACTCTTTGTCTT TG

GAGGCGAAAAATTACGAAGAGATTGCAAAAGTTGAGAAAGC

TCATGGAAGCCGCGAGCGTAGAGGTTCCGCGTGCTCTGCCGGACTGTGAGCAGGTCACTG GGTCCTTTACACTTGTGAATTCGAAGCTTGCCAGATGTATCCTCAATGCATTGCCACT TC

TGCCCGGTTGTTCACAGGCTGTCTGGTACCGAGATCTCCGACCAGTCTGGGGGCGCTGG

WO 01/42467 PCT/US00/33312

## Table 1

Sequence 217

CCCGCGGTGGCGGCCGAGGTACTATCAAACAACATGATACAATTTAAATGTGTCATAGCA
ACTACTAGTGGTCACCTGAAATCCATTTTCCCCTCCTTCACAGTAAGAGTTTTAGNTG

Sequence 218

CCCGCGGTGGCGGCCGAGGTACCATCCTGTTCNACAGAGCCATTGCCTATTCCTAAATTG
AATCCGACTGGGCGTGCCCCTCCTCGGAACACAGCAGACCCTTAATAGTGGAAACATC
GATGTGCCTCCCAACATGACAAGCTGGGCCAGCTTTCATAATGGTGTGGCTGCCTG
AAGATAGCTCCTGCCTCCCAGATCGACTCAGCTTGGATTGTTTACAATAAGCCCAAGCAT
GCTGAGTTGGCCAATGAGTATGCTGGCTTTCTCATGGCTCTGGGTTTGAATGGGCACCTT
ACCAAGCTGGCGACTCTCAATATCCATGACTACTTGACCAAGGGCCATGAAATGACAAGC
ATTGGACTGCTACTTGGTGTTTCTGCTGCAAAACTAGGCACCATGGATATGTCTATTA
CT

CGGCTTCTTAGCATTCACATTCCTGCTCTCTTACCCCCAACGTCCACAGAGCTG
Sequence 219

GTTATTGGTGGTGAAGACCCGNAGCAACAGTGGGCATGTCTTCTCGCGGTCGATCGGNTT CTCTGGCTCCTTNTTAATTTCCTCCTGGGNAACGCGCGACTCCACCGCCATCTTCCTCCT ACGGCCTGCGAGACGCTCCCCGCGTACCTCGGCCGCTCTAGAACTAAGTGGGATCCCCC GGGCT

Sequence 220

GGCGGCCGAGGTACCATGATATCATGTATCCTGCTTGGACATTTTGGGAAGGGGGACCTG
CTGTTTGGCCAATTTATCCTACAGGTCTTGGACGGTGGGACCTCTTCAGAGAAGATCTGG
TAAGGTCAGCAGCACAGTGGCCATGGAAAAAGAAAACTCTACAGCATATTTCCGAGGAT
CAAGGACAAGTCCAGAACGAGATCCTCTCATTCTTCTGCTCGGAAAAACCCAAAACTTG
TTGATGCAGAATACACCAAAAACCAGGCCTGGAAATCTATGAAAGATACCTTAGGAAAGC
CAGCTGCTAAGGATGTCCATCTTGTGGATCACTGCAAATACAAGTATCTGTTTAATTTT
C

GAGGCGTÄGCTGCAAGTTTCCGGTTTAAACACCTCTTCCTGTGTGGCTCACTTGTTTTCCC

ATGTTGGTGATGAGTGGCTAGAATTCTTCTATCCACAGCTGAAGCCATGGGTTCACTATA
TCCCAGTCAAAACAGATCTCTCCAATGTCCAAGAGCTGNTACAATTTGTAA
Sequence 221

GCNGGTACAGCAACAAGAATCAGATGCTCTTTAGAGATCCTCCATTTCATTACTCTAACA
TTCTTCAATGTGGTTCCAGCCACGCATAGTCATATAGATACTACATATNCAAAGATAAC
T

TACTGAAGCTTGTTCACAGAACCAAGCTTTCTCCTGGATAAGCTCTTCTNTCCCCTAC

CGCACTTCTTGGGNAAGGTATTACCCCAAAATGCTCTTCAGNGGATTTAAAATAAACAAT TTTTTAAAAANANGGACACTTAACACTCACAAAAAAATGGGGGAAATTTTGCTCGGGCCA TTGGACNGCGGAAACCAAATTACCGGGTTTAACTTCCAAGNATGGCTTGTCATTTCAAAA ACCTGGTATTGGGGGTCCCGTTCGGAAAAAAANANATAGGATATTAACCCATNTTTTTCT CATAAGGACCAAGCTATTCTTACNTTTTAATCAACCCAAATTTCCTGGGGGGAAAGGNCC

TTTCTTCTTATTTTAGGTCTTCGGGGATAGGTCTTNTANTCCCAATAAATAATTGGGGT T AGGTATTCAATCCATAATCCTCCCAGGACCCTGGGTTTTCCCTNGGAAGAAACAAGGGAA GAGGTCNTTGCCTGGTATCCTCNAAAAGGTTGGAAACCAAGCTTGGCNACTTTATCTTCT

Sequence 222

ATGGCCGGCCTGCGGAACGAAAGTGAACAGGAGCCGCTCTTAGGCGACACACCTGGAAGC AGAGAATGGGACATTTTAGAGACTGAAGAGCCATTATAAGAGCCGATGGAGATCTATTAGG ATTTTATATCTTACTATGTTTCTCANCAGATGTAGGGTTTTCTGTAGATGATGATGTCC

TATGGCCATATCTCCAAAAGANATGAATCCGACAGCNGATACAAAGTTTTTTTGGGCTGGG TTTATTGCNTCATATAGNNCTTTGGCCCAAATGGNANGCTTCACCCTATATNTTGGGT TT

ATGGNCTAAATTATTANGACCCANAGGAY: AAGGAGCCTCNTTAATTGGTCTCCCATCTT
GATTTTTCCCGTGGNAAGCACAACCTGCCCTCTATGCATATCTTCCACCATCCCCAAGCT
TTCTCATAAANTAAAAATAACCTACCAATGGCCTGGGTTGCNTCCGTNGGGAATTTGNNT
GGGGAAATTTGGGAAGCCANGTTTTTTTCAAGACCTTNGGNNTTTACAATTCCCTTTGGG
AGAAA

Sequence 223

GGGCGGCCGGAGTGATGCCATCTGCAGTTTTGTGATCTGCAATGATTCTTCCCTTCGAGG TCAGCCCATTATCTTTAATCCTGACTTTTTTGTGGAGAAACTCCGACATGAGAAACCT GA

GATTTCACTGAGTTGGTGGTCAGCAATATCACAAGGCTCATCGATTTACCTGGAACTGA
GTTGGCTCANCTGATGGGGGAAGTGGACCTTAAGTTGCCTGGCGGGGCTGGCCCAGCATC
AGGATTCTTCCGGTCTCTCATGTCTCTCAAGCGAAAGGAAAAAGGAGTGATATTTGGGTC
CCCACTGACGGAGGAAGGCATTGCCCAGATATACCAACTGATTGAGTATCTACACAAAAA
CTTGCGAGTAGAGGGTTTGTTTAGAGTACCT

Sequence 224

CCGCCCGGGCAGGTACTCCCTGATAAAGGGGAATTTCCATGCCGTCTACAGGGATGACCT GAAGAAATTGCTAGAGACCGAGTGTCCTCAGTATATCAGGAAAAAGGGTGCAGACGTCTG GTTCAAAGAGTTGGATATCAACACTGATGGTGCAGTTAACTTCCAGGAGTTCCTCATTCT GGTGATAAAGATGGGCGTGGCAGCCCACAAAAAAAGCCATGAAGAAAGCCACAAAGAGTA GCTGAGTTACTGGGCCCAGAGGCTGGGCCCCTGGACATGTACAGACTCTCATTTTATGAT GTATCCTACTGCATCAGGACATTTGTGTCAATGTCAGGTGACGAGGGGAAATGAAAGTGA TGAGACGATGAGAGGAGTGAAATACCAAGGACGCCATACTAGGAAACCCAGGTCTATTTG

GAAAGCAGGTGCTGTGGGCATCTGTATGGGGGAATCGCACTCATAGAATTATTTTCATTT
GTAAATATTTGGTATCAGGCCCAGCAAGGGAAA

Sequence 225

CTCCCGCGGTGGCGGCCGAGGTACTCACAGTCACGCAAATTCACAGTCTGCGTGCACGG CTCTCCATTCTTCTTGGCTTTACAGGTTCCCAGGTCAAGAGCTTCACCCATAATTA

GACCTTCTGAGGATGATCGATAGATAAACACACCTCCTCTGAACCATCCTTGGGCTTCAT
GGGGTTGGCATTGAGGATCCCTACGACAGTCCCCTGCTCCGTCTTCCAGAGCGCTTTGTG
AACTTCTCCAAATAAGAACAAGGACACACATTGTGTCAGGTCACGAAGATCATTCAGTTT
CCATATGCTGAAGGTTTTTCCACTATTCACACTCTGTGGCGTAACCTTCTTCAATATAA

C CCCAAATGTCACCCAATCTATTTCTTCCAGCTTCTCTCTGGCCATCTTTTCCTTGATCT G

AGACAGTCTGATCAGTTTT

### Sequence 226

## AAAAT

### Sequence 227

CNCCGCGTGGCGCCCCGGGCAGGTACGCAAAGTGATTCAGAGAACGCTGGGGCTCA
CAGGCGCTGTAGCAAACGTGCAACTCTTGAGGAACACTTAAGACGCCACCATTCAGAACA
CAAAAAGCTACAGAAGGTCCAGGCTACTGAAAAGCATCAAGACCAAGCTGTTACTAGCTC
TGCGCATCACAGAGGGGGGCATGGTGTTCCACATGGGAAATTGTTAAAACAGAAATCAGA
GGAGCCATCGGTGTCAATACCCTTCCTACAAACTGCATTATTAAGAAGTTCAGGGAGTCT
TGGGCACAGACCAAGCCAGGAGATGGATAAAATGTTAAAAAATCAAGCAACTTCTGCTAC
TTCTGAAAAGGATAATGATGATGACCAAAGTGACAAGGGTACCTCGGCCGCTCTAGAACT
AGTG

### Sequence 228

## Sequence 229

### Sequence 230

GGCGGCCGCGGGCAGGTACGCGGGGGGGGTCAGACCCAGTCAGGACACAGCATGG
Sequence 231

CCACCGCGGTGGCGNCGAGGTACGACGTTTCCATCAGCTTGTCTGTTTCATTCCTGAT
GTTACGAGCAATATGACCATCTTCTGTATTCTGGAAACTGACAAGACGCGGCTTTTATCT
TCACCTTTCTCTATAGAGCTTGAGGACCCTCAGCCTCCCCCAGACCACATTCCTTGGATT
ACAGCTGTACCTGCCCGGGCGGCCGCTCTAGAACTAGGTGGATCCCCCGGGCTTGCAGGT
AATNTCGGATATCAAGCCTTATNCGATACCCGTCGACCCTTCGGAGGGGGNGGGCCCCCG
GGTACCCCAGCCTTNTTGTTTCCCCTTTTAGGTGGAGGGGGTTTAAATTTGCCGCCGCNT
TGNGCGGTAAATTCAATGGGTTCATTAGGCTTGTCTTCCCCTGTGGTGNAAAATTNGTTA
ATCNCGGCTCACCAANTTTCCCACCACAAACCAATANCGNAGNCCCGGGGGAGGCCATTA
AAAAGGTNGTAAAAAGCCCTTGGGGGGTTGGCCCTAATGAAGTGGAGCCTAAACTTCACA
ATTAAATTTGCCGTTTGGCGCCTTCACTTGCCCCGCTTTTTCCAAGTCCGGGGA

Sequence 232

Sequence 233

AAAAAAAAAAAGATATTTTAATATATCAGATCCNCAAATATGAAATAAAACTAAGNNGA GCTGGTATTCATTTACACATAATTATCTTATACCGTTNGGAATAAGAATTTGGGGCNC GT

TAGCAAACCAAAAGGCTCAAAAAGACGTCGNGATATTTAGTTCTTGTCTCCCTCTACAAA NGGGAAGCACTNTTTTATCCGGCATTCCTAGGGGNGTTCCTATTTTCAA

CGGTGGCGGCCGNCCGGGCAGGACGCGGGGGCCAGTTCTCTTCGGGGACTAACTGCAACG GAGAGACTCAAGATGATTCCCTTTTTACCCATGTTTTCTCTACTATTGCTGCTTATTGT

AACCCTATAAACGCCAACAATCATTATGACAAGATCTTGGCTCATAGTCGTATCAGGGGT
CGGGGACCAAGGCCCAACATGTCTGTGCCCTTCAACANGATTTTGGGCACCAAAAAGAAAT
ACTTCAGCCACTTGTAAGAAACTGGGTATAAAANAAGTCCATCTGTGGGACAGNAAAAAC
CGACTGTGGNTATTATGGAANTGTTCGCCCTGGGTTATTATGGAGGAATNGGGAAAGGGA
AATGGAAAAGGGCTGCCCAAGNCANTTTTTTAGCCCATTTGACCCANTGGTTTTATTGGG
CACCTTCTGGGGCCATCCGGTNGGGGGAGGCNCACCCCACAAACCGGNAAGCCGCCTTA
TTTCCTTGGACCGNCCCTNAAANAAACCTTGAAGGGGGAAGGGGNGGAATCCGGAGGGG
AAAAGGGGGGA

Sequence 234

T AATTCCTGTTATCGGNATATGGGTATCNAAATTTGNTTTGCCCTAGTTTTTGCCTTCTC

TTGCTTTCTGAATTGGGGGCAGCTTTGCCCCTCAAGGGGAAATTTAGCAATGTCTGGAGA
CATTTTTTTTATTTTCATAATTTNGGGAGGGGACATGGGGGGAGGTTTGGTGGCTACAGG
AACCTTAATTAAGGTTCGAGGGACAGGGGTTAGGTGCTTGAACGGTTNCCACANGTAACA
CTTCGGGCNCGCTTNTAAGAAACCTAGGTGGGATTCCCCCCCNGGGTCTGGCNANGGAAA
ATTCCGANTATTNCNAAGCCTTANTCGANTACCCCGGNCGACCCTTNGANNGGGGGGGG

Sequence 235

Sequence 236

GCGGCCGNCCGGGCAGGNACCTACGCCACAGACAGCCAGAGGGAAAGCGACCCAGACAGC
AGCCCCTCCTCGACAGGCCCACCCTGCAGCTCAGGCACCAAGAAAACAGCCGATACTGGC
AGCCATTGCAGCTCCAAACTGCANNAGGCAAGGCCAATTTTAACTTTTCAATTTACAGTC
GATTTTGAAGAGCTTTCTACATATCCGGTTATGTAAANTTCATATATGTATTTTTTTGGAA
ATCAGTTCTTATANAACCAGCCTCCGATTCAAGTCTTTAGGCTAAAATTTTATAGGTCC
T

AAGGGTAGGTATGGTTAACAATTTTGGAACCTTTTTGGTCCTTAAAGAAAAAGGTTGGAC
TTGTTTCAANATANTTTCTNTCTTACCTNGTGAAAAGGAAAATCNTTACTTTTTTCCTAA
TTAAAAAGGAATTCTTGTTACCCTTCGGGCTCCGCTTCTTAGGAAACTTAGGTGGGGATC
NCCCCCGGGGTCTTGNGAAGGNAAATTTTCGAATATTCCAAAGGCTTTTATTCGAATAC
CCCGGCTCGGAACCTCGGNAGGGGGGGGGGGGGCCCCGGGGTACCCCCAAGCTTTTTNGT

Sequence 237

GCAGTTTTGTGATCTGCAATGATTCTTCCCTTCGAGGTCAGCCCATTATCTTTAATCCT

Sequence 238

CCCGCGGTGGCGGCCGAGGTACGCGGGGATTGTGTGCAAAATCAGAGAGGGGTGCAAGGA TCCTGATTTTTCAGGAGTTCAAGCGACAATGGCAGCCCAATACGGNAGTATGAGCTTCAA CCCCAGCACCACGGGGCCAGTTATGGGCCTGGAAGGCCAAGAGCCCAGAAATTCCCAATT GAGAATTGTGTTAGTGGGTAAAACCGGAGCAGGAAAAAGTGCAACAGGAAACAGCATCCT TGGCCGGAAAGTGTTTCATTCTGGCACTGCAGCAAAATCCATTACCAAGAAGTGTGAGAA ACGCAGCAGCTCATGGAAGGAAACAGAACTTGTCCGTAGTTGACACACCAGGCATTTTCG ACACAGAGGTGCCCAATGC

Sequence 239

CCGCGGTGGCGCCGAGGTACCAGTTAAGTGAACAGCTCGTCTAGGTCTGCTTTTGTAAC
ACCCAAATACAATTAGCACTTCTCTGCTGGTATTCCCTGGGCCGTCTTAATTATCTAG
AG

GCCAGGAGGCAAAGCCTAGCACGTAACAAAGTATGTGCTTTGTAACTGCTGATTAATTCA GTTTCTTAACTAGGCAGAGCAGGTCATCAGTGTATCTAATTCACACTATTAATACACTG T

TT

Sequence 240

GTGNGTCTTTTATTAGCTATCANCGTTCATTTAACAGACAAAAAATTCAAGTTCAATG

Sequence 241

Sequence 242

TGTCTCAGATCAAGGAAAAGATGGCCAGAGAGAAGCTGGAAGAAATAGATTGGGTGACAT TTGGGGTTATATTGAAGAAGGTTACGCNACAGAGTGTGAATAGTGGAAAAACCTTCAGCA TATGGAAACTGAATGATCTTCGTGACCTGACACAATGTGTCCTTGTTCTTATTTGGA

AAGTTCACAAAGCGCTCTGGAAGACGGAGCAGGGGACTGTCGTAGGGATCCTCAATGCCA ACCCCATGAAGCCCAAGGATGGTTCAGAGGAGCGTGACTGTGAGTACCT

Sequence 243

GTACGCGGGGTGCTGGGATTACAGGCACGAGCCAGTGCGCCCAGCTGCCTCTGTTTCTTT
TATTAAGCTGTTCTGGACTGTGGGGCTCCTTGGGCAGATGCTGTATTATGGGGATAAGCC
ACACACTTTTTGAACTGGCCCGGTCAGGGGGGGACATAACCATTTNCTGTGCCACCCCATC
AATCCCCACCTATTCTGAGTGTAGGCTCCTCCCCTGCTTGAGTAATGGCCACAGATCTTG
GCTCGGCACTCCTAAGCTGCATGTTGAATTCCTGGGACAACAAGACTGGCTTGTGGTTCC
ATTCTCCAGATCCTTGGGTTGGCTTCTGGGTGCACTAGGAGATCTGAAATGCTCTCAGGC
CACCAGGAAAGTACTGGAAGTAAAGTCTGACTCTAAAGAAGATGAAAATCTAGTAATTAA
TGAAGTAATAAATTCTTCCAAAGGGAAAAAAACGCAAGGNAGAACATCAAACAGCTTGTGC
TTGTAGTTCTCAATGCACGCAAGGGTCTGAAAAGTGTNCTCAGAAGACTCTNNAAGAGAC
GAAACGAACCCTGTGCCTGTAACTTTTGAGGNGAAAAGAACAAAAATGGCTCTTAGGNGG
TCCCGAAAAAAN

Sequence 244

TCCACCCACCTCGGCCCTCCAGTGTGCTGGGATTACAGGCATGAGCCACGGCACCCGGCCCTGGTTTGCTTTCTGAACCATGTCAATACAGTACCACCACAGTTGCTATCTCTTGAAC

CTTTCATTAAAACATCACCGTCTAGTTTGAGAATACTTTTAAGCCTGCTGGCCTCCTTT

GGGCATTCTTTTTCTCTTTTCAGCACGCATCTTTCTTTTCCACTTACTCCGTAAGCTT

TAGCCATGTTTTACCTTGAGGGCCGAAGTTAACTTCAGCGGGAGTGAACGACAGGGGTGG GCTCCACTTTATCCAGTGCACTCGGAAGCCGGAGGGCCCCCACCAAAAAGAGCAAGGGGA ACCCTC

Sequence 245

Sequence 246

GCGGCCGTGGGGATCAGCGTAGGTGAGCTGNGGCCTTTTGCGAGGTGCTGCAGCCATAGC
TACGTGCGTTCGCTACCGAGGATTGAGCGTCTCCACCCATCTTCTGCGCNGNCACCATCT
ACATAATGAATCCCAGTATGAAGCAGCAACAAGAAGAAATCAAAAGAAGAATATAAAGAA
ATAGTTCTTGTCCCAAAGGAAGGAAACTCTTGAAGGATTGAATTTCAGCCCTTCTTGCAT
CTTGGGATCTCTTGGTTGGGAAACCGAAGGAAANAAATNGGAAGCCTTGTCCCGCAAGNG
CTTTGTCCANANAAAGGGGAAAACCATTCTGGGGGAATGGACCCACCTTTAAACCATCTAC
CAAACCTTCCAAGCCCCTTGGGGGGGGTNTATTTGGTCCCCAACACAAAAAAATAGAAGTA

Sequence 247

AGACTGTCTCAGATCAAGGAAAAGATGGCCAGAGAGAAAGCTGGAAGAAATAAGATTGGG TGACATTTGGGGTTATATTGAAGAAGGTTACGCCACGGAGTGTGAATAGTGGAAAAACCT TCAGCATATGGAAACTGAATGATCTTCGTGACCTGACACAATGTGTCCTTGTTCTT AT

CGGCCGGAGTGATGCCATCTGCAGTTTTGTGATCTGCAATGATTCTTCCCTTCGAGGTCA
GCCCATTATCTTTAATCCGGACTTTTTTGTGGAGAAACTCCGACATGAGAAACCTGAGAT
TTTCACTGAGTTGGTGGTCAGCAATATCACAAGGCTCATCGATTTACCTGGAACTGAGTT
GGCTCAGCTGATGGGGGAAGTGGACCTTAAGTTGCCTGGCGGGGCTGGCCCAGCATCAGG
ATTCTTCCGGTCTCTCATGTCTCTCAAGCGAAAGGAAAAAGGAGTGATATTTGGGTCCCC
ACTGACGGAGGAAGGCATTGCCCAGATATACCAACTGATTGAGTATCTACACAAAAACTT
GCGAGTAGAGGGTTTGTTTAGAGTACCT

Sequence 251

TGGCGGCCGAGGTACCAGCACAAACCGGGCCAGCCTCCTAAACTGCTCATTTACTGGGCG TCTACCCGGGAATCCGGGGTCCCTGACCGATTCAGTGGCAGCAGGG Sequence 252

GTGCACATGCACACACAAATGGGTGAAACAATTCTCACCATACCAAGAGCCACCGCGCCCTGCCGAGAATTTGCATTTCTAACAAGTTCCCAGGTGATGCTGACACTGCTGGCTCATGGAACCACTGCTGTAGTATTTTCCAAATTATCCTGATTCTAAGAACCACCTATGACCTGTG

CTGTTTTTCTGTGGTTACTGGCTCATGTCACATAAATTCTTTTAGGATTCAAACATGT

AAATTAGCCTATTTAATCTTTTTTTTGGGT

Sequence 253

Sequence 254

CTCACCGCGGTGGCGGNCGAGGTACTCATGGNTGCTGNAAATCATGGCACGCCCGTTCTG CAGGGNTNTGCTTAGCCAGGCTCCTNTGAGATCTGGCTATTNTGNCTTGTGGATNNTCAG TCCCGNGTACCTGCCCGGG

Sequence 255

CTCCCGCGGTGGCGGCCGAGGTACGCGGGGATTGTGTGCAAAATCAGAGGGGGGTGCAA
AGATCCTGATTTTCAGGAGTTCAAGCGACAATGGCAGCCCAATACGGCAGTATGAGCTT
CAACCCCAGCACACCAGGGGCCAGTTATGGGCCTGGAAGGCAAGAGCCCAGAAATTCCCA
ATTGAGAATTGTGTTAGTGGGTAAAACCGGAGCAGAAAAAGTGCAACAGGAAAACAGCAT
CCTTGGCCGGAAAGTGTTTCATTCTGGCACTGCAGCAAAATCCATTACCAAGAAGTGTGA
GAAACGCAGCAGCTCATGGAAGGAAACAGAACTTGTCGTAGTTGACACACCAGGCATTTT

Sequence 256

ANCGCACCACCACCTGATTAATNTTTTGNATTTAAANNTTTAGGTGGGGCTNCACC
ATGTTGCCCAGACTGGTNTTGAACTCCTGAGCTTAAGCAATCCACCTGCCTCGGCCTCCC
AAAGNGTTGGGATCACAGGCGTGAGCCACCGCATCCGGCCTCATGTTCTTTTTCATTAAA
GAGAGAAATCAACTATTCAGGACCGGCCCCCACCTTTCCTCAGGAGTCATTTCTGTTCCG
CACAGGCCTGCTGAACTGGGTGCTTTATATAGGGNANAGGGGGCCTCATTTTTNGTTCCC
CTGNCCCNCAAGCNTTANGGGGCAAAAANAAAAACCATNCCAANAATTTGGNAAAGGGNNT
TTTTTTTTTTTTNAAAATNNGGNNNGGGGGGGGGCCCCCCTCNCTTGNGGTCGGGNGGNTTT
TNCNGGNGNNAAAAAAAAAAAAAAAAAAAA

Sequence 257

AGCTCCCGCGGTGGCGGCCGAGGTACTCTGACTTGCAGGGCCCAAGACCGGCCTTGCGA GCGTCGTTGGCTGATGGGAGTAGAAGCCACAGAGAGTCTTCCTCTTGGAGGTACAGTCAA TTCTGAGGTTTGGGCGTCATAGACTAAACCCAGAAAACAGAACATTGGGAAGTCTTCGGA ATATTCTCTTCTTCACCAACGAGTAAGACCGTTTTG

Sequence 258

GGCCACGTGACCGACGCCAACATNGCGGCGCCCAGTGGCGTCCACCTGNTTTTCCGCAGA GGTTCTCATAGAATTTTCTCTTCACCACTCAATCATATCTACTNACACAAGCAGTCAAG C

AGTCAACAAAGAAGAAATTTCTTTTTTCGGAGACAAAGAGATATTTCACACAGTATAGTT TTGCCGGCTGCAGTTTCTTCAGCTCATCCGGTTCCTAAGCACATAAAGAAGCCAGACTAT GTGACGACAGGCATTGTACCTGCCCGGGCGGCCG

Sequence 259

Sequence 260

TTCGGGGTNCGGTTTCNGGGCTTGNCGGGGCGNAGGCCGGGTAATNCAGCCTTCAACTTC
AAAAGGGCNGGGGTAAANTAACNGGGTTTATTCCCCACCAGGAAATTCAAGGGGGAATA
NACCGCCANGGGGAAAANGAAACCATGNTGGAGCCAAAAAAGG

Sequence 261

TGTGTTGAAAAATTGTTATCNNNCTTCACAAATTCCACACACATACCGANGCCCGGNNA GTCATAAAGTGTAAAAGCCCTGGGGTGCCTTAATGTAGTGAGCTAACCTCACATTAATTG CGTTGNGCTCACATGCCCGCTTTTCCAAGTTCCGG

Sequence 262

GGGCGGCCGAGGTACCGATAGAACATGGCATCATCACCAACTGGGACGACATGGAAAAG
ATCTGGCACCACTCTTTCTACAATGAGCTTCGTGTTGCCCCTGAAGAGCATCCCACCCTG
CTCACGGAGGCACCCCTGAACCCNAAGGCCAACCGGGAGAAAATGACTTCAAATTATTGT
TTGAGACTTTTCAAATGTCCCANGCCCATGTATGTGGCTTATCCAGGCCGGTCGCCTGTC
TTCTCTTATGCCTCTGGNACGCACATCCTGGCATCTGAGCCTGGACTCTTGGAGATNGGG
TGTTCACTCCACAAATTGTTCCCCCATTCTTATNGAGGGGGGGCTATTGCNCTTGGCCCCC
ATGNCCNATCATTGNCNTTCTNGGATTCTGGCCTGGCCCGANGAATCTTCACTTGAACTA
CNCTTCATTGGAAANNATCCCNTGGACCTGGAANGCGTGGGGCCTAATTTCCCTTTCGGT
TTACCTAACCTGGCTTGNAAGCCGNTGGAGGAATTGGTTCNCGGGGGACCAATTCAAAAG
GGAAGAAAANCTGG

Sequence 263

Sequence 264

CGTGCGGATCTTCTTTTTTGNGGCTTCCTTCANGGGGTCAANAAAACCCTTCTNGGCC TTTAAAGCCTTCGCTTTGGCTTCAGCTTTAGGAGGGGCAGGAGCTTCCNCCTTCGANNTC GGCGCCATCTTGNGAAAAGCCCCGCGNACCT

Sequence 265

AGCNNCCCGCGGTGGCGNTNGCCNGGGCANCCCGCGGGGGTGGAAACCTCTTCAGCATTN
GCTTNNNNTCAGGGGGCTAAAAAACCCANCAACCGGGACCCCAGCTTTTCAGAACTGCAG
GGNAACAGCCATCATGAGNGAGGGCACCAAGAATTCCCTGGAGAAAATCCTTCCACAGCT
GAAATGCCATTTCACCNGGAACTTATTCAAGGAAGACAGNGGCTNNTNGGGANCGNGGGG
ATAGAGNGCGCAACCAGGGNGAAANNTTAAACACNGAGNNCAAAGNGGNCGNGGGNCCCN
CGGCCGCTCTAGAACCAGGGGACCCCCGGGCCCCGCAGGAANNCCGANANCAAAGCCNAA
NCGAAACCCGGCNACCNNCGAGGGGGGGGCCCCGGACCCCAGCNNNNNGGNCCCCCNNAA
GGGNGGGGNAAANGNGCCGCCNNGGCGGAAANCAAGGGCAAAGGCNGGNNCCCNGGGGG
NAAANGGGNANNCCGNNCACAANNNCCNCACAACACCAAGCCCGGGAGGCANAAAAGGG

GAAAAGCCCN Sequence 266 AGGTACTTTTC CC CCACTCAGAG

AGGTACTTTTCTAGGTATTGCTGGGCAAGATCCTTGTTGGAGTCCTCTTTTTGCTG

CCACTCAGAGGATAGGCAGAGCAGACAGCACAACAGCACAAGGAATGCAAGATGC
ATCATTCTCACTGCCCTTACCTTCTTTGTCTACTGGGCTTCTCCCCGCGTACCTGCCC
GG

GCGGNCGNTCGAGCCGCCGGGCAGGTACTACCTGNACCAACTTTTTCATTTGGGCATCAC
AAAGACGAGTCTTCTGATGTTCTATAAGCAATATGNTTATATGAAAGNCAGAAGTTTAGC
GAAAATTCGGCCTAAACAGNAATAAATGAAAATGGANTGGAAATCAAAGNNCTTAAATAG
AACANGAAGGCNGGGCACCGGNGGNTCACGCCTNGNANNCCCAGCACT

Sequence 267

TTTTAGCGGTGGTCGCGGCCGAGGTACGGATACAATTCCGCTGAGTTAGATTCCAAATTC
TAACCTCTCCATCACACGCCCCAGAAAGGACAGTAGCCAGCTTCTCTGGATGCTTTGCCA
AGCAATTGACTCCATCACGGTGACCATCCAGCGAAGCAAGGAATGGTTTTGCAAATACTC
GTTCCAGTTTGGTAGCATTTAAAGCTCTTATATATTCTCGTGGGACCTCAAAAGGATG
TA

AAGCAGGATCATAGTTTCTTGGAACTCTCTGTAAGTCCAACTTGGTTTCGCGGACAT.AAT TGTCCGGATTCCGGCTCAGCATCTTCACCTTCATCTCGGTTGCTCTTC

Sequence 268

NATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACATTTATATGAAAGTCCTCACTTTCAGA AGCAGAAAAGGAGTAACTAGATGGGCATTTTCTATACCAGCTAAGGCTTTAAACATAACA ACGTCTACTGAACTATTTTCTACTTACTTTGACTGAATAAGCCAGTGAGATCGTGACTG

C TGAGAAATTACTTCTTTCTTGCACCTTATAACTTGACATTGTCAGATTTAATTTTT Sequence 269

ATTGGAGCTCCCGCGGTGGCGGCCGAGGTACGCGGGATAGTGGAGGCACTGAAAGACCA
GCAGAGGCATAAGGTTCGGGAAGAGGTTGTTACCGTGGGCAACTCTGTCAACGAAGGCTT
GAACCAACCTCGAGCGGCCGCCCGGGCAGGTACAGGATGCACAGGAGGCCATAGGGTTTAG
GCAAAGGGGAGCACAAAAGTTGAAGATGAGGCGCTGCCACCAATGCTGGGACTTCAGGCC
AGGGGCAGGAGCTGAGGAAGCCACAAGGGAGGACATTTTCTGCAGTTGCTGAACCAGTAG
CAACCAGGTCCTGAGAAAGCCCTCTCTTGTGGAAGAATAACAGCCAGGAGGAAAAGCTTT
TCATTCTGCAAAGCTGGGGCAGAAAGTTCTTNTTTGAATCCCGCGTACCTCGGCCCGNTC
TAGAACTANTGGATTCCCCCGGGCTGGAGGAAATTC

Sequence 270

GTCTTCGGNTTTTCTCTTTTTTCCAGGGCCTCCAANCCCTCGTCAGCCTCCCGC
Sequence 271

GGGAGGCGNNAGCGAAGGAAGAAGAAGAAGAAAACCCAGCGCCCCCACG NACCT

Sequence 272

TTGGAGCTCCCGCGGTGGCGGCCGAGTCCCACAGTTAGCTGCAGCAAAACGCAGGCTGC

CTCAGGGAAAGGAGCCTGGGTTGATTAACTTGTGTGTCAATGTCCCACCGTCCCAGGTA
ACATTTTGCCCCCTGAGGTCCGGGGTAATTTAATGGCTGCTGGACAAAACCTCCAAAGTT
CTTGAAAGATCAGAAATGATAGCTACCTGGAGTCCAGCTGTACGGCACTTGGCGTAAAGC
CGCTTCCCTCAAGAGTAACTACAATCTTCCCATGCACAAGATGATTAATACAGATCTTAG
CAGAATCTTGAAAAGCCCAGGAGATCCAAAGAGCCCTTCGAGCACCACGCAAGAAGATCC
ATCGCAGAGTCCTAAAGAAGAACCCACTGAAAAACTTGAGAATCATGTTGAAGCTAAACC
CATATTGCAAAGACCATGCGCCGGAACACCATTCTTCGCCAGGCCAGGAATCACAAGCTC
CGGGTGGATAAGGCAGCTGCTGCANCANCGGCACTACAAGCCCAATCAATGAGAAGGCCG
GCGGTTGCAGGCAAGAAGCCCTGTGGTAGGTAANAAGGG

Sequence 273

TNTTAGGGNCAAACACGGCCCCAGCCCGCGNCCCAGNCNGNGCGAANGATTTTTTCAGGGNGACAAAAACCCAGGNCACCCACCTGCCCG

Sequence 274

GCGATTGGAGCTCCCGCGGTGGCGGCCGAGGTACCGCGTCGATGCTATGCGCTCAGTTC
TAGTCAGAATAATCTTGCTCATCCTCCAGCTCCCCCTGTTCCACCAAGGCAGAATTCAAG
CCCTCATCTGCCAAAACTACCACCAAAGACTTACAAACGGGAGCTTTCGCACCCCCCATT
GTACGCGGGGAGGAGCCTGAGGAAGAGGGCGGCGACGGTGGTGGTGACTGAGCGGAGCC
CGGTGACAGGATGTTGGTGTTGGTATTAGGAGATCTGCACATCCCACACCGGTGCAACAG
TTTGCCAGCTAAATTCAAAAAACTCCTGGTGCCAGGAAAAATTCAGCACATTCTCTGCAC
AGGAAACCTTTGCA

Sequence 275

CAGCGAGCACGCGTNTTCCGCAACCCGAAACCNCCTTACAGGAGGTTTAANACNCANCCC AACGGGGAGAGNGGGGGAAACATGANGACAGANNNNGGGGGAANGAAAATGGNACCTCGG CCGCTCTAGAACTA

Sequence 276

AGGTACGTTCTATTCCTGCTCCTATTAGGTCCTTCTCACCGCACCGGCCCTCGGTCGATT
ACGCCTCTCCAGTTCTGCTGGGGACGTTCTAGCCTCGCCCCANCCGCGTCGATCTTTATG
TTATACCGTCACTCCCAGTGCCCTAATGGAACTATCCCTCCACTACTCCCCCTGGTTCTA
CCCGGCTCCAGAGCCTCTCCCGGCCCACTAATTTATTCCCAAATTCTAGGCCCGGCCCCA
TCAAGCCCTCCCCGCGTACCTGCCCG

Sequence 277

GACTCCCGCGGTGGCGGCCGAGGTACGCGGGGGGGGGCCCTACCGTGTGCGCAGAAA GTGGAGGCGCTTGCCTTCAGCTTGTGGGAAATCCCGAAGATGGCCAAAGACAACTCANCT GTTCGNTGCTTCAGGGCCTGCTGATTTTTGGAAATGTGATTATTGGTTGTTGCGGCAT TG

CCTGCTGCGGAGTGCATCTTTTGTATCTGACCAACACGCCTCTACCCACTGCTTGAA GCCACCGACAACGATGACATCTATGGGG

Sequence 278

TTCGCCCGGGCAGGTACTTTCATCCATAAAGGCCTGCAGCTGTTTCACTGATCCTTGCAG
TTCATCCATCACCAACTCCATACAGTCAAAGACTTTGCTCTGGTTCTGTAATATTTTCT
G

GTAGTCAGGTTTTGTATTAAGAACTTCATTCTGAGAAGACCCAAGATATGTCATAGGTTC CACTTTGACCTCAGTAATTTTGGCCTCAGTTGATCCTCTGGACAATATCTCTTTAGCCT C

CTGCTGGTAGTGAGGCAAGAGCTGATCCCAAGTCTGACGTTCTAAAGAAAACTTTGTTATGTATTCCTTCATCTCAGCCACAGATGCTTCCAAAGAAAAATCTGATGCTTTTCCATTTG

ATCTTCAAAACATTTTTGNAGAGTTCCATCAGTTTCCAGGCCGTCTGCAAAATGTTTCA

TTCTTCAGAAAGAGAAGATGCTTTGGCTCTAAAACTTTCAAGACTGAAGCCCTTAGTGGC

**CCTTANGAAAGGGT** 

Sequence 279

GGAATCTTGCNCTGCATAGTTCAAACTAAAAAGAAGAAGAGTTAATTACCTGAAAAGCAAGAGAAAACAAGAAGGAGGGAAATCATTTAAGAAGTGTCTGGTATTTTCAAATTTCTGTCAGTTGTTACATTTGTCATAAGTAAATGTTTAGGAATAAAGGATG

Sequence 280

CCGCGGTGGCGCCGAGTNATGCCATCTGCAGGTTTTGTGATCTGCAATGATTCTTCCC TTCGAGGTCAGCCCATTATCTTTAATCCTGACTTTTTTGTGGAGAAACTCCGACATGA GA

AACCTGAGATTTTCACTGAGTTGGTGGTCAGCAATATCACAAGGCTCATCGATTTACCTG
GAACTGAGTTGGCTCAGCTGATGGGGGAAGTGGACCTTAAGTTGCCTGGCGGGCTGGCC
CAGCATCAGGATTCTTCCGGTCTCTCATGTCTCTCAAGCGAAAAAGGAAAAAAGGAGTGATAC
TTGGGTCCCCACTGACGGAGGAAGGCATTGCCCAGATATACCAACTGATTGAGTATCTAC
ACAAAAACTTGCGAGTAGAGGGTTTGTTTAGAGTACCT

Sequence 281

CGCGGTGGCGGCCGAGGTACTTNTNACTGCCAGAGGCTGTGACGNTGTGTATTCNGAGAG CAGCCTTNCCTGCANTGATNCCATCCGCAGGAATCNAANTTCTCCCTNGATACNGNGCA CTCTGCCTGTCTTTCCACNTTTCCCTTTCNCATTTTGCANTACACNGTTCACCACNCT GC

CCTTAAGGCTTGGAAACTCACNCCACCTTCAAGCNTCCCATGGTTCTCTGCCACTCATGG
GTCNGGGNAACCAGGGTGGACAAGGGGGCCAGAATCAAAGNCGTTCTTTCACCCCCACCC
ATGGGCCAAGGGGAATGGGGGCCCCAGNNNGGGGTTCCCCAAAGGCANCAAGNAAAANNA
ACTTGGANACTTGGAAGTGGANGGGCCATTGGNAGGCAAGNCCTNGAAAANGCCANAAAA
AGGGGAGGGGNCNGNAACCACCNCAAAAAAAGGTTTGGANGGCCAGNAAAAAGGGANANNGG
GCCCCAGGGGAAAAAAACCTTTTGGGCCCCATTTTTTTTCCAATTTTCCAATTGGGCCT
TG

GGCCANTAATTTCAAAGGGAAGGAATTANCCTTGGGNNAAAGGGGNTNGGGGGGGG Sequence 283

50

## Table 1

CTTGGCTTTTCNCAAAGGTTCNAGGCTTTCCNATTCTCAATTCCCCCCCAAAAGGGGAGG AAACCNTTTCC

Sequence 284

CNACNCAAANCTTCCCTTTAGTTAGNCGCGGAATNTCNCCGCCCCACAAGTAAGAAAGT TCNCNTGGNNAAGNCCCACCAAGANCCTTTTTTTTTGGCTTTTTTTGCCAATTTGGTGA AG GGAAG

Sequence 285

GCGGCCGAGTACCCGATAGAACATGGCATCATCACCAACTGGGACGACATGGAAAAGATC
TGGCACCACTCTTTCTACAATGAGCTTCGTGTTGCCCCTGAAGAGCATCCCACCCTGCTC
ACGGAGGCACCCCTGAACCCCAANGGCCCAACCCGGGANGAAAAATGAACTTCAAAATTA
TTGTTTTTGGAGAACTTTTCAAATTGGTCCCCAGGCCCATGGTATTGTGGGCCTTATC
CC

CTCCCGCGGTGGCGGCCGAAAACTGATCAGACTGTCTCAGATCNAGGAAAAGATGGCCA GAGAGAGCTGGAAGAAATAGATTGGGTGACATTTGGGGTTATATTGAAGAAGGTTACGC CACAGAGTGTGAATAGTGGAAAAACCTTCAGCATATGGAAACTGAATGATCTTCGNGACC TGACACANTGTGTCCTTGNTCTTATTTGGAGAAGTTCACANAGCGCTCTGGAAGACGG AGCAGGGGACTGTCGTATCGGATCCTCAATGCCAACCCCATGAAGCCCAAGGATGGTTCA GAGGAGGTGTGTNTATCTATCGATCATCCTCAGAAGGTCTTAATTATGGGTGAAGCTCTT GACCTGGGAACCTGTAAAGCCAAGAAGAAGAATGAGAAGCCGTGCACGCAGACTGTGAA TTTTGCGTGACTGTTGAGTACCTCCGGCCGCTCTAGAACTANTTGGATCCCCCG Sequence 288

GCCAAACGCTTCCGCAAAGCTCAGTGTCCCATTGTGGAGCGCCTCACTAACTCCATGATG ATGCA

Sequence 289

GGACAGACTGGCTCATNGAAGACATTNACTNTGATGGGACCATTTNAANCNGATAATTTT
TCTCATAACCTGAGAGGAGTNATCCCACGAAGTTTNGAATNTTTGTTTTCCTTAATTGA
T
CGTGAAAAAGAAAAGGCTGGAGCTGGAAAGAGTTTCCTTTGTAAGTGTTCCTTTATTGAA
ATCTATAACGAGCAGATATATGATCTACTGGACTCTGCATCGGCTGGA
Sequence 290
TGGCGGCCGCCCGGGCAGGTACGCGGGGGCCCGTAGGAGCCTCTCTCCCTACTGCTAC
ACAAAGACCCTGAGACTGACCTGCAGGAACTNAAACCATGAAGAGCCTGATCCTTCTTGC
CNTCCTGGCCGCCTTANCGGAAGTAACTTTGTGTTATGAAATCACATGAAAAGCCATTGG
GAAATCTTTATGGAAACTTAATTCCNCTTTTNATTTAAANCCAGGGNAAGNNAATATGT
N
AAAAATTCCNCTTTTTTATTANNTCCCCCTCTNCAATCCAAGNANGNATGGGGGAAGCNA
GCNTAAAACCNCTNCNNATNANANAGNTNGGGTTTCTAAATAAGNAANCCTTTCTTTCTA
AANANGNNCNTNGNGTTCCCACCGATATCTTTTATATATTNNGGGATTNANCCCCCCCNTN
TGNNAGNTTTATNTACTTTNACNNANGCATTTTTTTTTNNGTGNAAAAAACCCCGCNNT

Sequence 292

GACATCAATCGACTGCCTTAATTCCTGGTCCAGCTGCCCGACCCTGACTCTCTNCCGCTC
TTTTCCTCAGGTCGAANGTTTNCTTTAAGATCACGCTGACGTCGGACCCACGGCTGCCGT
ACCTGCCCG

Sequence 293

Sequence 294
GCGGTGGCGCCCGGGCAGGTACGCGGGAGGCACATTCTTTTCTACGTGAAGAGTTN
TGTAAACTGAACTTTGTTTTCAGNNCCGGCTCCAGCCATCCTCGGGTAGCTTGCCAATAG
ATGAATCCCACTCGTTTGACCCATGACGCTCCTTCTTTGCATNNCTCCCTCTTTCCCC
AC

AGCAGNGCATGTCCACCATACCACCTGAGAGTCTGTGGAATCTAATTTTCTGTNATACTT

CTTTCCTTACACTCATTTTCCTGTCTTTATTATGATAGTCTAACTTTTTCTCCTCAAAGG TATAGCTGCCTTGCTTTCATGAAAACACACTTTCCTATTGTGATTTATCAGAGGCCTTT C

Sequence 295

CNCGCGGTGGCGGCCGGAAGAGCAACCGAGATGAAGGTGAAGATGCTGAGCCCGGAATCC
GGACAATTATGTCCGCGAAACCAAGTTGGACTTACAGAGAGTTCCAAGAAACTATGATCC
TGCTTTACATCCTTTTGAGGTCCCACGAGAATATATAAAGAGCTTTAAATGCTACCAAAC
TGGAACGAGTATTTGCAAAACCATTCCTTGCTTCGCTGGATGGTCACCGTGATGGAGTCA
ATTGCTTGGCAAAGCATCCAGAGAAGCTGGCTACTGTCCTTTCTGGGGCGTGTGATGGTA
GAGGTTAGAATTTGGAATCTAACTCAGCGGAATTGTATCCGACCCT

Sequence 296

CCGCCGGGCAGGTACGCGGGGCTCCCTTGTGAGTAGACTATGCAAAGAAAAAGTGGGCCA CCATATCTGGAAACTACAGTCTATGCTTTGAAGCGCAAAAGGGAATAAACATTTAAAGAC TCCCCGGGGACCTGGAGGATGGACTTTTCCATGGTGGGCCGGAGCAGCAGCTTACAATG AAAAATCAGAGACTGGTGCTCTTGGAGAAAACTATAGTTGGCAAANTCCCATTAACCACA ATGACTTCAAAATTTTAAAAA

Sequence 297

GCGGCCGCCGGGCAGGTACGCGGGGGGGGGGGCTCCGAAGTCTGGTTTTGGGCGGGAATTG
AAACCGCCGCTGAAGCCAACAAGAATTTGAGAACTGTAAATACCAAGCCTTGAAAGGGAC
CATGGTGCGGCCTGTGAGACATAAGAAAGCCAGTCAAATTCTCACAGTTTGACCACTCTG
ACAGTGATGATGATTTTGTTTCTGCAACTTGTACCTCGGCCGTTCTAGAAACTTANTG
GA

Sequence 298

CGCTCGCCCTGAGCACTGTATTTATTTCCCCTTACTCANTCCCCAGGGGACTTCTTCCAA
GTAAGCCGACANACTTCTTGCNGGCCCCGCNCGCNCANTCTTTTCCCGGNCCGGCTTCTT
AGTAAACTTAGGTTGGGAATCNCCCCNCGTGGGCCTGGCNAGGGGAAATTTTCGGAATTA
TTCAAAAGGCCTTTATTCNGAATAACCCGGTTCNNACCCCTTTCNCAAGNGGGGGGGGG
CACCCCGNGTTAACCCCCAAGGACNTNTNTTTTGGTGTNCCCCCTTTTTAAGTTGGAAGGG
GGGTTTTAAAAATATTGGCCGACCGNCCTTTTTGGGTCCGNTTANAAATTCCAATTGGGGG
GNTCAATTAAGGNCCTTGNTTTATTCCCCTTNGTNGTTGGAAAAAATTTNGTTNTAAAT

CNCCGNCNTTTCAACNAAAATTTTTCCCNANNCAACCAAAACCNAATTAACCNGAAGNCC CCCGNGGGGAAGNCCAATTAATAAAAANNTTGGTTAAAAAANGGCCCCTTGNGGGG Sequence 299

TGGCGGCCGAGGTACTTCTGTCTTCCAGTTTTCCACTTCAAACTTCTATCTTCTCCAA

TGTTTNATCCTACCACTCCCAATTAATCTTTCCATTTTCGTCTGCGTTTAGTAAATGCG

TAACTAGGCTTTAAATGACGCAATTCTCCCTGCGTCATGGGATTTTCAAAGGGTCTTT

AATTCACCCTTCCGGGTTTTAAATCCTCTTTTTTTAAAAAGAATCCGTCCTTTCAAAAAT

TATNTTTAAATTCACCCTTACCAACCTTTTTAAAACCTAAAAACCTTTAAAGGCTTGTTT
TAAAGGTCCACCCTTTCATTTTTTAAATCTAAAAAAGGCCATTTGGCCCCTTTCTAATT

T GGGNTAATTNAAATTCCGGGGGCCTCTTGTTAGGTACCCTNTTCTCTTCAAATTTTTAT

Sequence 300

CCTTCTTTTCATTGTAGCAATGATCTCAACACGTG

GA

Sequence 301

TCCCCGCGGTGGCGGCCGGAGTGATGCCTCTGCAGTTTTGTGATCTGCAATGATTCTTCC CTTCGAGGTCACGCCCATTATCTTTAATCCTGACTTTTTTGTGGAGAAACTCCGACAT GA

GAAACCTGAGATTTTCACTGAGTTGGTGGTCAGCAATATCACAAGGCTTCATCNGATTTA
CCTGGAACTGAGTTGGCTCAGCTGATGGGGGAAGTGGACCTTAAGTTGCCTGGCGGGGCT
GGCCCAGCATCAGGATTCTTCCGGTCTCTCATGTCTCTCAAGCGAAAGGAAAAAGGAGTG
ATATTTGGGTCCCCACTGACGGAGGAAGGCATTGCCCAGATATACCAACTGATTGAGTAT
CTACACAAAAACTTGCGAGTAGAGGGTTTGTTTAGAGTACCTCGGCCCGCTCTAGAACTA
GGTGGATCCC

Sequence 302

TTGGAGCACCCGCGGNGGCGTTTTGGGACGCNCGGAACNGCAATGCTTCAGGACCCACA GGAGCGACTCTTTAAAGGGACCACAAAANCCGCACAGAGCTGCAAACAACTATACATGAT ATAATATTAGAATGTGTGNACCTGCCCG

Sequence 303

GNGGCGTTTTAGGGCGNAACGGCCCCCCATCATGGCGGACCCTAGAGAAAGGCTCTTAGG GGGACCNAAACCCGNNGCCCGAACACAAGGAGANCGACGGCCGCTCTTNAACCAGNGGAG C

Sequence 304

Sequence 305

NTTAAGAGCAAAGGCTCATGTTTGCCAAGTCTGTCCTTTTGTAACAAAAAACCCAGCAGC TTTATCAAGCAGAATTCCACCTGTATTTCTTAACTTGCCAGAGCTGAGTCTCATGGCC AC

AGAAGCAGGACAAAGAACATTTGCAATACAGTTGTATTTATAAAATTTTGTT Sequence 306

TTGCGGCATTGCCCTGACTGCGGAGTGCATCTTCTTTGTATCTGACCAACACACCCTCTACCCACTGGTTGAAGCCACCGACAACGATGACATCTATGGGGCTGCCTGGATCGGCATATSequence 307

CACCGCGGTGGCGGTTTAGCCCGGCGCNAAATCACCATTATTCCCCTTTAGTCACCTCAG AGGCTTGTTAATGCTTTCTTTGTAATTAGGCTATATCTGGTATCTGTATAATATCTTCA G

TTCTTCTTTACCAGGGGTCTTACTCTGTTCTGAAACATGGCACCTCAGGCGGCTCCGGCAGCGCTGGACACAGGAAACTCCTGGGTCCCCGACTCCGGCTCTCCTNGACCCCCTCTTCGGTTAACTCCGCTTGTTTCTCTACAAAATGGCGCCGGAGGTCCCCCGCGTACCTSequence 308

TGGGGNAACCGCGGNGGCGGTCTTGGGGNCAACACGGAAACCAAACGAACCGCGGCTGC ACCAGCNGNCTTTTTTNGGGGNGCCAAAAACCCGAGCAGCCGAAANCNGGAACNGCCNCA GNNGTGTNCCNGCNGAAGAANGNCNANCCCAGAGAGGCCAAAGNACCC Sequence 309

Sequence 310

CACCGNGGACAAGAGCAGGNGGTNCTTGGGGGGNGNAAAACCCGCNCCGCGANGCAAGAGGCTCNGCACAACCACTACTNTNCAGAAGAGCCGGGNCCNGNCCCCGGGAAAAAGAGNGCGA

Sequence 311

CCTGAGGAAAAGCTCGCACCAGGNGGACGCGGATNNGGTANGGGGGGTAAAANACCCNCC CCAACAAGCCGCGGGGCAAAANGNCCNCGTACNTCGGCCGCTCGAGAACTAGCGNACCCN

Sequence 312

CCCGCGGTGGCGTTTCCNGGCCAGGCACTTGGAGAAAGTATAGCAGCAAACAATGCCTAT TTTTNACAGGAAACAGAACANATACCCAGAAAAATGCCCTGGCAATCATCAAATCACAGT TTTCCAACATCAATAAAGTGTTTAACTCCTCATTTGAAAGATGGTGTTCCTGGATTGAA

ATTGAAGAATTAATAGAGAAACTTCAGTCTGGAATGGTGGTAANGGATCAGATTTGNGAT GNGAGAATATCTGACATAATGGATGTATATGAAATGAAACTATCCACATTAGCTTCCAAA GAAAGCAGGCTACAAGATCTTTTGGAAACAAAAACTCTAGCCCTTGCACAGGCTGATAGA CTGATTGCTCAGCATCGCTGTCAAAGAACTCAAG

Sequence 313

Sequence 314

Sequence 315

CTAAGCATATGGGGCTTACTTGGCCCCCCTATCAATTTGCNGTCAAAATAAATTAATT

AGACCTGTCTTGTTTTATGAAAAAGCAATGNGATAGTCTTTAAATTTATCTTTCTAAACA AGACACAAGTTTACACATTACCCANTTACAGNAACCCCTCTTGGTATTGTTTACCTAAA

GGAAGAAGTGTAGGAAAAACNGATATAAGTAGAGAGTTTATTTGGGCCAAGCATGAGGGT
TACAACCCAACTGTATGGAGACAAGTTGGCCTGAACAATACACATTCTTATTAGCAACAG
NTATAAGTAGGNTTTCAAAGAAAAAGAAGAGGCAGNTCCTAA

Sequence 316

TCGNCCGGGCAGGTACAGAGACCTNCTTACTTACCCCCCTTNTCCTTCGGCTGGAGCTCG
GCGAGCGAGAGGCGGCCGCTGGCGTTGGAGAGCGACGGCGCCCCCGCGTAAGCAGTGGN
AACAACNCAGAGTAACGCGGGAATGAAGAATNTTAGGCGGGTGCACCCAGTTTNCACCAT
GATTAAGGGTNTTTACGGAATAAAGGATGATGTCTTCCTTAGTGTTCCTTGCATTTTG
GG

ACAGAATGGAATCTCAGACCTTGTGAAGGTGACTCTGACTTCTGAGGAAGAGGCCCGTTTGAAGAAGAGTGCAGATNCACTTTGGGGGGATCCAAAAGGA

Sequence 317

TTTCGCCCGGGCAGGTACTTGGAGAAAGTATAGCAGCAAACAATGCCTATAGACAACAGG AAACAGAACATATACCCAGAAAAATGCCCTGGCAATCATCAAATCACAGTTTTCCAACAT CAATAAAGTGTTTAACTCCTCATTTGAAAGATGGTGTTCCTGGATTGAATATTGAAGAA T

Sequence 318

ATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTTATTGATGTTGAAGATGAGAAATCT CCTCAGACTGAAAGTTGCACTGACAGTGGAGCAGAAAATGAAGGTAGTTGTCACAGTGAT CAGATGAGCAACGATTTCTCCAATGATGATGGTGTTGATGAAGGAATCTGTCTTGAAACC AATAGTGGAACTGAAAAGATCTCAAAATCTGGACTTGAAAAGAATTCCTTGATCTATGAA CTTTTCTCTGTTATGGTTCATTCTGGGAGCGCTGCTGGTGGTCATTATTATGCATGTAT

AAGTCATTCAGTGATGAGCAGTGGTACGGGTGGGAATAGCACTACACTGTTCATCTAGCC
TTGTAGAATAAGTCCCAGTGAACTGATATTCTGCAGAATCTTCACTGTTAT

Sequence 319

CCCAGATTGTTAAAAAGCTGGCCGTTATAAATGCCCATCTGCAGCAGCCGCCTGTAAAACCCGGAGAGCTATTTCTGGCTGATCAGAATAGAAGTGGTTG

Sequence 320

ACCCNCAGGAGACGCTCGNAGCCCCCGCGCTNNTCCGGGGNCAGAAAACCCAAGAAGCGGCTCACGCCTTCCAGAGCCACATCATNTNTGGNCGAAANAGAAGCCCAGACNAGAGGAAGGAAGGNAAGGAGGCCNGCAGGNACC

Sequence 321

CAAGCGGAGNNAACCGAAGAGGGGNACTTGGGGGGCCAAAAAACCCGGACCCAGGAGNNN CCNGNGNCCAGCGCNGCCGGTTCCGCCNGAGGGGGGCACNCCCCCGCCAAGGCNGGAGNG CAGCGGCACAANCCCNGCNCACNGCAGCCNNGANANNCNGGNCNCAGGNGACCAGCACCC NTGCTNTTTNTACNGGGAAGNNGCNAAGCNACCNGNCAANANAGCANACAAANNGAAACN GGGGGNGGNGAAGAGACNNAGAAGNNGGANGCCAGGAAANGGGANGAAGACCAAANGGGC CANGNNNCAGAACAGAGAAGACCCCNGGNAA

Sequence 322

CTCCCGNGACGAAAACACAANNGNTTCTTNCGGGGGACAGAAAACCCAGACCCAGCTNCA GGGACAGCCTGGACTACTTTNTTTTCACACAAACAAACCTCCCGCGNANNCTCCTGGGC CA

Sequence 323

GCCACACTCGCACCAGGTTGTCCGTGTAGCCAGCAAACAGAGTCTGGCCATCAGCAGACC AGGCCAGGGAGGTGCACTGGGGTGGTTCTGCCTTGCTGCTGGTACCTGCCCG Sequence 324

AATAAAATAAGCATGTCTCCATCCTTTATTCCTAAACATTTACTTATGACAAATGTAACA ACTGACAGAAATTTGAAAAAATACCAGACACTTCTTAAATGATTTCCCTTGGTTCAAAAT

TACCCCTTCTTGTTTTCTCTTGCTTTTCAGGTAATTAACTCTTCTCTTTTT
Sequence 325

ATTGAGCTCCCCGCGGTGGCCGGCCGAGGTACCATCAAGTTAAAAGCAGAAGATGCTTCTG GTAGAGAGCATTTAATCACTCTCAAGTTGAAGGCAAAGTATCCTGCAGAATCACCAGATT ATTTTGTGGATTTTCCTGTTCCATTTTGTGCCTCCTGGACACCTCAGGTAAATTCTCCT

AGAGCTCCTTAATAAGCATTTATAGTCAGTTTTTTGGCAGCAATAGAATCACTAAAGGCAT TCTGGGATGTTATGGATGAAATCGATGNGAAGACCTGG

Sequence 326

Sequence 327

GCTCACCGCGGTGGCGGCCGAGGTACTTAAAACCAAATAAAAAGTGACATTTGAATTTCT
TTTAAAAGGATTTCCGAGCTCACAGTCAGCTTGCGAGCCATTCTCCCGCGTACCAGCACA

AACCGGCCAGCCTCCTAAACTGCTCATTTACTGGGCGTCTACCCGGGAATCCGGGGTCCCCTGACCGA

Sequence 328

CGCGTCCGCCCATCTCAGTGTCACAGACACTCCTGGGTTTGGAATTTTGTTGTTCTCT

Sequence 329

NAACTTTACAGGATGGCATTTAATACAGATATTTCGTATTTCCCCCACTGCTTTTTATTT
GTACAGCATCATTAAACACTAAGCTCAGTTAAGGAGCCATCANCAACACTGAAGAGATCA
GTAGTAAGAATTCCATTTTCCCTCATCAGTGAAGACACCACAAATTGAAACTCATAACTA
TATTTCTAAGCCTGCATTTTCACTGATGCATAATTTTTCTTATTAAATATTTAAAGAGAC
AGTNTTTTCTATGGGCCATCNTCCAAAAACCTGCTATGNACCATNCAACTTAGGTTCT
TA

CNTTTCCTGCCTTAAATTTNTAATGGAGNAANGGGTATTTCTTTTCAATTTTTAAAATTT GCATTTTTTGGGGGAATTATACCTTCCCACCAATCTTTTTGANTNTATTTTTCCTTTGG

CCTTAAATCATGAATTTTTTCAAAATTAANAAGGTTNNAAAGNTTTAAA

Sequence 330

TAGAAATTCTCTTGTCTGGATCTTCTCCATCTTCATCTCCACTGTCTTCATGAACAGCA

CTTCTGGAATAGCCTGCATCTGGACACCCAGGTGCATGAGGTAACATGCGCAAATTTTCA
AACAAACCGCTGGTTTATCTTTTC

Sequence 331

**TGCCCG** 

Sequence 332

Sequence 333

CGCGGTGGCGGCCGNTCGGGCAGGTACGCGGGGACTCTGAACGTGCTAAAATGGGAAGGG AGGCGGTGTTTTGCTGATCTGTTAAATTCTTAGTGAAGTTTCCTTGATTTCCAGTGGCT G

CTGTTGTTTGAGTTTGGAGCAAAACTGAGGTAGTCCTAACATTTCTGGGACTGAA

## TCCAGGCANGAAAAAAAAAAAAAAAAAAAAAAAAAGGTACCT

Sequence 334

GATATTCATTGCTCCATCGATTGGATCCAGTCCTTGTTCAGAAAATTGTTTCAAGGCACT

TAAGGCTGCCTGAAAGCCTTGAATCCTTGCTAAATATTCCAGTTGTTTTGAAGGTTGT AC

CTCGGCCGCTCTAGAACTAG

Sequence 335

GCTCNCCGCGGTGCCGCCCCGGGCAGGTACTTGACTGCTAACAACTTTCAAATTCTT
CTACTTACTCCCTCTTCTTCAGCTTCACATCTGGGAAAACTGATAGGGAAGCCTAGGTAG
GCCTACCTTTGGTGCCAGAGGGAAGCTCAATCCATGCAAGCCCAGATAATATATGAGAA
CCTCCCCAACCTTACCCTACACCCCTCACCTCCCAATCCAAGCCAGTCTCCTTTCCCTGC
TTTCTCAAACCATGTTTGGACCTGCTTGGAAGCTCCCTCTGCTCTCCCTAGAAAGCTT
CA

Sequence 336

C

CTCCCGCGGTGGCGCCGCCCGGGCAGGTACTCATGAAGGAGATGGCCCCTTTGGGAGC
AACCAGAGAATCACTGAGATCCCAATGGAAACAGGAGGTTCAGCCAGAGGAACCGACTTT
TAAGGGATCACAGAGCTCACACCAAAGACCAGGGGAACAGTCAGAAGCCTGGCTTGCTCC
TCAGGCTCCCAGGAACCTGCCTCAAAACACAGGTCTCCACGACCAGGAGACAGGTGCTGT
GGTCTGGACAGCTGGGCCCCAGGGACCAGCCATGCGTGACAACAGAGCTGTATCCCTCTG
TCAGCAAGAATGGGATGTGCCCAGGCCCTGCACAAAGGGCCCTCTACAGGGGGTGCCACC
CAGAGGAAGGGACAGTCACGTCTCGCTGGCAACAGGGTGTTGCCCTGGGGCTATTGAAGA
GACCAAGACGCTCCTGGCTATTTTTTAAGTAGTTCTCAATTTTTATGGGNAAAACTNCA

GACCTTNTTCAGCCAGNAACAGCCCCAGATTCTTACAGGGGCCATTGGGCGGAAGGGACTCTTGGGAGCCAANGGGTTTTTTT

Sequence 337

CCGCGGTGGCGGCCGAGGTACGCGGGATAATCAAGGTGTACATCCCGGTGGCTGGACATG
CCCTCTTGGGCTTGGCAGATGCCAGTGGATCCATACAACTACTCCGCCTGGTGGAATCTG
AGAAGAGCCACGTGCTGGAGCCATTGTCCAGCCTTGCCCTGGAGGAGCAGTGTCTGGCTT
TGTCCCTAGATTGGTCCACTGGGAAAACTGGAAGGGCCGGGGACCAGCCCTTGAAGATCA
TTAGCAGTGACTCCACAGGGCAGCTCCACCTCCTGATGGTGAATGAGACGAGGCCCAGGC
TGCAGAAAGTGGCCTCATGGCAGGCACATCAATTCGAGGCCTGGATTGCCGCTTTCAATT
ACTGGCATCCAGAAATTGTGTATTCAGGGGGCGACGATGGCCTTTCTGAGGGGCTGGGAC
ACCCAGGGTACCTGCCCCGGGCGGC

Sequence 338

AAGGGGGNGGNAAAACNAANGGGGGCAAAAAAGGGCCNGGGNNNNCCCCGGGGGGAAAA GGCGNNTNGGGNNGGCTANCNAAAANGGGGNACNGGGGGNNCTTTCCAAANNAAAGGGGG AAAA Sequence 339 CGCGGTNGCGGCCNTCNTTTTTGTTTTTTTTTTTTTAATAGCTGAAGATTTAGATTTAT TTGAAAACACTTAGTCTAATTTATATTAGGTGCAGAAAAATCACATTCAATAAACCACA TTGTAGAAGAGACAGATAAGTGTGTTTGTCACATTTTCACACAAATATAATTTGATNTT т AATTAAGGGATGATGAATCNCAACCCCTTGTTAATAAATGATTTNTTCTCTCAGTAANT GCAAGAATCTNTTTTGNGGTTNCCGGGNCCTCNNGGGGTTTATTCNNANACNGGGNGCCG TTTTANAAATTTTAAGGGAATTTTTTTTTTTTTTAAAGNCCCNNTNCCCTTCCCCTTTTT TGGGCNATTTCCCCCNGNAANAAAAAAATTTTTNCCCCGGGGGNATAACCCCCCCNAG GGGGTAAAAAACCCCCCNTCTNNGACNNAAATTTTTTGGGGGGGCNNGGTTTTTTTTNG П Sequence 340 CACCGCGGTGGCGGCCCGGGCAGGTACGCGGGGGGGGCCCTACCGTGTGCGCA GAAAGAGGGGGCGCTTGCCTTCAGCTTGTGGGAAATCCCGAAGATGGCCAAAGACAACTC AACTGTTCGTTGCTTCCAGGGCCTGCTGATTTTTGGAAATGTGATTATT GCGGTGGCGGCCGGCCGGGCAGGTACCAAAGAAGATGCAGTTAAAATACTGCCAGTTTTC CAAGAAATTTTGTAAAGTTGAACATGGCCATCTACTCTTGCCTTAAAACTTTTCTCACC Α CACCCACCTTCCCACATGCATGATATCCAAGGTCGACAGACCTGGATTAGAATCCACTCT CAAGCTTTATGCAGTGCGTATTGTATTTTCTGCATAAGAAAGGGCTGCCTCTAGAACACA GTAAGTGTATTTGCCCAGTAGTGACATTGCCTACATATAGCCAAGTGTTATAGTATACCA ACTTAGTATATTTTTCAAGGAGAGCTAAACCACCTTTTGTAATGTTTGGTTTCTCACTG N TATCTTCCTTTCCTATAATTAATTTATTTTAATCTACAAATTGACATAGGGCTAAAAGCT TCAATATTTACAAAATATTAATTAATGTAATTGTTCCCAATTATTAGAAACTTTTTTCC ATTTTCAAAATGTTTGCCAACTTCACACAAGTGTGTAAAAATAGGGCTCT Sequence 342 CCGCGGTGGCGGCCGAGGTACAGGTTTAGTCTGAATGCACTGTCATGAAATTTAAACTTT CATTATAATACTGTTTTAAGAACTTACAGCATCTGCTTTACAAATGGTGTTAGCTACAT TCGACACAGCATCTTTAGCCAGTTTTCTTTTGGAAGTTCATCTGATGTCATCTGGAAAC Т ATCTAGGGTTCCAGAATAACCATAAACATTAAGTGTCACTCCTTGGAAAATGACAGATGT ATGCAAGTTTAGTTCCCTCAGAGCAATGAAATTCCAATGAAATGAACTATCACTTCTCCA CTTTCCTTGTCCTATTTTTAATAAGACAAGAACATCACCATATTAAGTTGAAGTACCT CCCGGGCGCCGCTCTAGAACTAGGTGGATCCCCCGGG Sequence 343 CCCCGCGGTGGCGGCCGGCCGGGCAGGTACATCAGAGATGCTCACACCATTCTTTGAGTA GTTTAAAAACTCATTTTAACCACTTTTTATTCTTTGTATTCAAACCAATCACTGGCAATA

C TTCTTCCCGTAAATTAATGGAAGGAAATGAGTGTCTGAGTTCTTAGAATCTCAAAAGGCA TGAGGATAAAGCTTTCCTGGAGATAATATAAGTGGTGGCAGGAAGATTTGGGAGCCAGAT GATACTCTTTTCCTCTTAGAGAAACTCTGTGGAAGCTCTGCCTATACTGTGGGAAATAAA TTCTAGACGCTGGCTTCTTTCTGTAGTAAACATGTGGGCCCTTTAAAATGTTGAACCA AA TACAGAGGCTTCAGAGATGAAGAAACAGTTCTTACCCTAGTGTTGCTTAGAATCTAGTAG TAGTAAGTAATAATTACTAACATATGCATTTACTATATAGGCAATACTAGGGTAAATATT Sequence 344 GG GGGAGTTAAATAAAATAAGCATGTCTCCATTCTTTATTCCTAAACATTTACTTATGACA ATGTAACAACTGACAGAAATTTGAAAAATACCAGACACTTCTTAAATGATTTCCCTTGG TCAAAATTTACCCCTTCTTGTTTTCTCTTGCTTTTCAGGTAATTAACTCTTCTCTTTTTA GTTTGAACTATGCAGTGCAAGATTCCTCTGTAGTCTTTCCAAGTGGAAGGGTATAAAAAA AAAACACTTTATATTATGCCAGGTGAGGTGTCAGAACCCTGGCATCGGAAAGTGGTTGGC TCACGGGTCATAGGGTAGTAAGAAGAATTTACAGAAGACAGTATAGGTTCGAAAA AGGTACACTGCGGCGGGGGCAGAAAGCTGCAAGGAACAGAACCAGCAATGCAGAAGCTC CTTCTCAAGGATGTCTCAAGGGCTCCGGTGGTGCTCTCCTGCTCTATCCGCTGCTGTGGC AAATCCTCTAAAAACAGCGTTTTGCACAGCAGAGAGCAAAGTCCGCTTGTTATTCCACCC GATACGTGAGCTCAGTTTGCCAGCTAGTGATCAAGTCCAGCTGTTGGCCAAGTTGGTCCCT GAGGCCTTGTAGACTGACCTGTGGCAGAGAGCTCCCTGGGTCCAGCATCTGTTGCCCTCA CCCTTGACACATGCGGACCCTCCCCAGGC Sequence 346 GCGATTGGAGCTCCCCGCGGTGGCGGCCGGGGTACAAGAGAAGAAGACCAGTCCTTGCT TTCAATGTCGGATGGATGAAACCCAGACACATAGCAATTCAGGAAATTTGACTTTCCATT CTCTGCTGGATGACGTGAGTAAACCTGAATCTTTGGAGTACCCATTCCCTTGATGTCTAC AATATCACCTTTCTTATAGATTCGCATATATGTGGCCAAAGGAACAACTCCATGTTTTC AAAAGGCCTAGAGAACATATATCGGGTGCCTCTCCTCTTTCCCTTTGTGTTCGTCATT **GGCGAATTACTGGAAGATG** Sequence 347 AGCTCNCCGCGGTGGCGCCCCCGGGCNGGTACCACNGCCCAGCTAATTTTTTATGTT TGTAGTAGAGACGAGTTTCACCATGTTGGTCAGGATGGTCTCAAACTCCTGACCTCAGGT GATCTGCCTGCTTCGGCCTCCCAAAGTGCTGAGATTAGAGGCATGAGCCACCATACCTGG CTCTTTTGCTTCATCCATCCCTTAATTTCTTTGCTGGAGCATTTTAAAGCAAATATCAG CATACCCTTTCACGCCTCACACTTCAACATGCGGCTTGTTGAAAATTCGTGCTCCACTCCA GCAACTGCTTTCAATCGGAGTTCCATCCTCCGCCGCAGTATGCCCTAACGCAAGCGTTAT

CTTCAGAGCTACCACCAGGNTTCCGAAACTTTTTCGGNGGGAGGCGCTTTNGCCACCACC

TNGCCGGGNNAACGGNTNGCGTNAAACCAAACCTTTGAACGGCCAGNCCCCCGNGGTAC CTTNGGGCCGGTTTAAAAACTAAGNNGGGGATNCCCCCCGGGCTGGCAGGGAATTTCGAT ATTCAAGCTTAATCGATACCCGGCGACCTTCGAGGGG

Sequence 348

ACTCCCGGGTGGCGCCGCCGGGCAGGTACTTGACTGCTAACAACTTTCAAATTCTT
CTACTTACTCCCTCTTCTTCAGCTTCACATCTGGGAAAACTGATAGGGAAGCCTAGGTAG
GCCTACCTTTGGTGCCAGAGGGAAGCTCAATCCATGCAAGCCCCAGATAATATATGAGAA
CCTCCCCAACCTTACCCTACACCCCTCACCTCCCAATCCAAGCCAGTCTCCTTTCCCTGC
TTTCTCAAACCATGTTTGGACCTGCTTGGAAGCTCCCTCTGCTCTCCCTAGAAAGCTT
CA

CAACATCTGAAGCAAATGTTGGGTGGGGGGTACCTCGGCCGCTCTAGAACTAG
Sequence 349

CCCGCGGTGGCGGCCGAAGGAGGACGACGGTGCTGTGTGTATGAAGAGGCAGTGAA GACTCTGCCAACAGAGGCCATGTGGAAGTGTTACATCACCTTTTGCTTGGAAAGATTTAC TAAGAAGTCAAATAGTGGGTTCCTTAGAGGGAAGAGGTTGGAAAAAACCATGACTGTATT CAGGAAGGCACATGAACTGAAGCTTCTGTCAGAATGCCAATACAAGCAGTTGAGTGTTTC GTTGCTGTGTTATAACTTCCTGAGGGAAGCTCTGGAAGTGGCAGTAGCTGGAACTGAATT GTTTAGAGACTCTGGGACAATGTGGCAGCTGAAGCTGCAGGTGCTGATCGAGTCAAAGAG CCCTGACATAGCCATGCTTTTTGAAGAAGCCTTTGTGCACCTGAAACCC

Sequence 350

CTCCCGCGGTGCCGCCCGGGCAGGTACCCGTGCTAAAAGACTTTTAGTTCGGCTCT CCCAGTGTTTTTTTTTCGTCGATTTGGGCACAGAGTTTCCTGGTTCACGTGGATGTGA

ATCCTTTACTCCAGATCGCCAGCCAGTTTTTGTTTTTTTCCTGCGTTGCTGAGAGTCT

GGTTTATTCATCACACCAGGTGGATCTTAATTCCATATCCCTGAGGCCACTGCAATGAGG CAGAGGAGTGTGCTCCCTCATGAGAAAGGACTGGAGACCGCCCCAGAAGAGAACGTATC CATGTACCT

Sequence 351

GCAAAAACCAGAGCCAGGTGCATAATCTTGTAATCTGTGGATATCCCTGGAGCAGGACTG

Sequence 352

NCCGCGGTGGCGCCCCCGGGCAGGTTGGTAACAACGCAGAGTCCCGGGAAGCAGTGGT AACAACGCAGAGTCCCGGGAAGCAGTGGTAACAACGCAGAGTCCCGGGAAGCAGTGGTAA CAACGCAGAGTCCAGGGAAGCAGTGGTAACAACGCAGAGTACCCGGGGAAAAAAAGGCAAA TAGAATGAGAACCATATTATGTACCT

Sequence 353

CTCCCGCGGTGGCGCCGAGGTACACCCAGCTTTGTCTCCTGGCCCCAAATCTCCTTTTCCTTACTTTGGGCATTAACTGCTGTTGAGGTCTCACAGCCTGATGGTCATTATCCCTGAAT

GGCATAAATCAACAGGCTGTATGAGCATTGTGTGAGATTCTACATGAGGGAGAGCATTTC

AAACCCATGACAGATGAGAGAAGTTAGTACACTCTCACTGAACTGGGGATGTTTGACTTA
AAATGATGGACAATAAGATAGTGAGCAGTAAGTGTGCTCTAGGCTAGGCTACGAGAGGCC
ATGAGCTCCTCATCTCTCTCTGTTCTGAGCTCTCTGATCCACCGCACTTGGGGCAGGGG
GTGCATTCTCTGTGCCTCCTGAGTCTACTTTCTGCATCATTGGGTTCTCCCAGCTC
AC

Sequence 354

GGCAGAAAGATCATACAGTTAGGAATGAAGACATCAGAATGTTCCACTAAACAGATATTT
AACTAGATACTATTATACTACTAAGAATAGCAAGAATGTCTCTCAATTCTGGGAATTTC

CCTAGCTCACACAAATGAAACGCACATCTCCATGAATGCTTTCTAATAAATGCTTCCAGG ATAGTATCATAAACAAAGTCAAAATTAAGAAAAATCAC

Sequence 355

GCTCCCGCGGTGGCGGCCGGAACCGCCATCTTCNAGTAATTCGCCAAAATGACGAACACA
AAGGGAAGGAGGAGGCACCCGATATATGTTCTCTAGGCCTTTTAGAAAACATGGAGTT
GGTCCTTTGGCCACATATATGCGAATCTATAAGAAAGGTGATATTGTAGACATCAAGGGA
ATGGGTACTCCAAAGATTCAGGTTTACTCACGCCATCCAGCAGAAATTGAAGTCAAAT
TTCCTGAATTGCTATGTGTCTGGGTTTCATCCATCCGACATTGAAGTTGACTTACTGAA
G

AATGGAGAGAATTGAAAAAGTGGAGCATTCAGACTTGTCTTTCAGCAAGGACTGGTCT TTCTATCTCTTGTACCT

Sequence 356

GTTGAGCTCCCGCGGTGGCGGCCGAGGTACCTGACTGTGGCTCAGATCTGCGTCGCAGCA GCGAGAGAAAATCACTCCATATCCGATGAGAGGAAGGGTGGCACAGAGATGGTGTCTA CAATTAGAGACATTTCTGACTCCACCTTAGCCTAAGCAAACTTTATGTACTGAGTAACA T

TTGAAGGTTGTCTTTTAATGGTGGGGGGGTGTTTTTTCCTTTTTAAACTACAGTGCTTGC

CAAGAGAGGGAGGGACTCAGAAAAGGTTAGGGCAGGTGAGGGGAGACAGTAGATGGCCTGG GATGACTTGAGTCCATCATACTATTGCTTGGCAGGTGTCCTCCCCCATGTTTGATTCA AA

TTCCATGAGTGACCTACCTTTCCCCAGGAATGGGACTGAGAGGGTAGTCTCCAGCAACTC AGTCTGCACAGGGCTCCCCGTTCAGGCTGCCTTT

Sequence 357

TCCCCATTCCTCTAATATGTCACCAATTCTGCTGATACATTCTTTGTAATCTCTCCATC

ATTITÀATCTGTTATTCACCTGAGCTACACAAACATTCATCTGCACAAGGAGTATTCCA

GTGCTGAAAAGACAGAGGATTAAGCCCTCCTTGTGGAGGCATTCACAGTCTGGTTTTAAT

ACACAAACCAACAATTATAATACACAGGGATAAAAAAAGTAGAGGCACTTATTGCATACC TGTACCT

Sequence 358

TTGACTCCCGCGGTGGCGGCCGAGGTACTTTTCTAGCAGTCTGTGGCCACTCCATACTC
AGCTGAAAACACTGTTTCAGCCCCCTCTCTGGTGACCTCAGCCTTCTCCAGGTGTATCTC
TTGATGATCTTGGAGACCAGCAGCCACAGCTGCTACTCCTGCAGGAGACTGTCAGGC
TGTGGTGGGGGGCAGGGGTGTTGGAGGAGAAGTTGAAAATCCGTGTGTTCTCTCCTC
TGCTCCTCCATCTTAGCTTCTGGAGGAGTTAAGGCACCAAGGGCA

Sequence 359

NTTCCCCCGGGGGGGNNGGNNTTTTTTTAGGGGGGAAAANGGNGGTTTTANTCCCCCCN NNGGNAAANCCCCCCCNNTTTTNTTTTTTGGGGNNGGGAAANATTTTTTNGGGGGTGCN CNGGNGNNTTTNNNNANAANNNAAAACCCCCCNTTTTNNTTTTTTAANANACCCNCNNN AANNGGGGGGTTTTTTTTTTTTAA

Sequence 360

GATTGAGCTCCCGCGGTGGCGGCCGAGGTACTTAAAACCAAATAAAAAGTGACATTTGA ATTTCTTTTAAAAGGATTTCCGAGCTCACAGTCAGCTTGCGAGCCATTCTCCCGCGTACC AGCACAAACCGGGCCAGCCTCCTAAACTGCTCATTTACTGGGCCGTCTACCCGGGAATCC GGGGTCCCTGACCGA

Sequence 362

Sequence 363

GCTCCCGGGGTGGCGGCCGAGGTACTTAAAACCAAATAAAAAGTGACATTTGAATTTCT
TTTAAAAGGATTTCCGAGCTCACAGTCAGCTTGCGAGCCATTCTCCCGCGTACCAGCACA
AACCGGGCCAGCCTCCTAAACTGCTCATTTACTGGGCGTCTACCCGGGAATCCGGGGTCC
CTGACCGA

Sequence 364

TNCCGCGGTGGCGGCCGAGGTACAACGCATGAGTCCCGGGAAAGCATGTGGTAACAACGC

Sequence 365

TGACTCCCGCGGTGGCGGCCGAGGTACCAAGCACTGGGTAAGGCACTTTTGTGGAGCAT TAGACAGTAACCCTCAAGGAGCTAGAGAACCGGATGGGAGACATGAGCGGTAATTAACTC ACTTGTTCCCCAGAGTTTCTATTTGTTTTNTTTTCTTTTTCTGTGACTTATTTTCCTATT TTCTTTCCTCCATGTAATTTTCACTATGGCCCAACTAATATAAACACCTGGAAATTACA

CCACAGTGTGGTTCTAATCNATGGGAGATATCAAGTAATTTTTTAGTAACCTGAATTTT

AGGGACATTTCTCTGTTTAAGCATGTATGCAAACTGATATGTAATCCTGANGGTCCCAAG
TCAATTTTTTTCTT

Sequence 366

CTCCCGCGGTGGCGGCCGAGGTACTTTGCATCCTTCAACCCAATCAAGCTGACACTCAG
TATTAACCATCACAAGGCGTGAGGACAGATAGCTGCATCCGCAAAATAGAGAACCAAGAA
ATAGTCCCACACCAAAGTCAGGATCAAATGATTCCTGGACAAGCCACCAAGTCAATTCAA
CTGAGAGAAAGAAGCCTTTGCACCAGTTGGTGCTGGAAGTTCTGGATATGCACCTGGATA
AGTGAACCCCCTCCGTCACCACACAAACGTTAATTTGAGATGGATTGCAAACATAAA
AGCTAAAACCATTAACACTTCTTGAAGGTAACATAGAATATTTTGTAATGTTATGATAG

CAAAAGTCTCTTAGGACACAAAAAAATTAACCATAAAAGAAGAAAATGGCTGGGTGCA GTGGCTCACACCTTTAACACCAGCATGTTGGGAG

Sequence 367

**ACTAACCAAAG** 

Sequence 368

Sequence 369

TAAGTGCAATGGGGGAGTCATTAAGGATTTTGTGTAGATACAGCAAAAAGACAACAATCT TCAAGCCACAATGGCCCTCACCAGAACCCAGC

Sequence 370

CCCGCGGTGGCGGCCGAGGTACTTAAAACCAATAAAAAGTGACATTTGAATTTCTTTTAA AAGGATTTCCGAGCTCACAGTCAGCTTGCGAGCCATTCTCCCGCGTACCAGCAGAAACCA GGACAGCCTCCTAAGCTGCTCATTTACTGGGCATCTACCCGGGAATCCGGGGTCCCTGAC CGATTCAGTGGCAGCGGGTCTGG

Sequence 371

TTTTTTCATCCCAACTTCTTTCTTGCACATTTTTCTTCTAGCTATATTTAATATCTGTTC
TCCCCACACACTTGCTAATCTACATTTCACAATCTTCTTCACTTTCACTTTGTCTGCAA

GGAAATCTACCCTGGGACAGAANAAGCATCTCTTTTTTTTCCCCCTGACCCTTGGCA

TTCCTCTCCCTTCAACTT

Sequence 372

GATTGAGCTCCCGNNCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGGATGTCTCTTGTC
AGCTGTCTTTCAGAAGACCTGGTGGGGCAAGTCCGTGGGCATCATGTTGACCGAGCTGGA
GAAAGCCTTGAACTCTATCATCGACGTCTACCACAAGTACAAGAGATAGAAAGACCAGTC
CTTGCTGAAAGACAAGTCTGAATGCTCCACTTTTTCAATTCTCTCCATTCTTCAGTA

GTCAACTTCAATGTCGGATGGATGAAACCCANACACATAGCAATTCAGGAAATTTGACTT
TCCATTC

Sequence 373

CTCCCGCGGTGGCGGCCGAGGTACGCGGGGAGAAGGAATGGAAACGCCTGGAGAAAGAG GATGAAATGACGGATGAAGCAGTTGGAGACTCTGCTGAGAAGCCTCCTTCTACTTTTGCC TCACCTGAGACTGCTCCAGAAGTGGAGACCAGCAGAACTCCACCAGCCTGTGAAACCACG AACCCTTCAATCAAGAAAAGACCTTTGATCAGGAGAAGACTTCTCGTCTCATTTCTGGGG ACACATTCAGGATTTCTCCAAAGCAGGTGAAGGTACCTGCCCG

Sequence 374

TNNNNNNNNNNNNNNNNAAANNNGGGGTNCCTTGCCCGGG

Sequence 375

TCCCGCGGTGGCGGCCGAGGTACCTCAGCTGTTGATCTGTGGAGCCTAGGAATCATTTTA
CTGGAAATGTTCTCAGGAATGAAACTGAAACATACAGTCAGATCTCAGGAATGGAAGGCA
AACAGTTCTGCTATTATTGATCACATATTTGCCAGTAAAGCAGTGGTGAATGCCGCAATT
CCAGCCTATCACCTAAGAGACCTTATCAAAAGCATGCTTCATGATGATCCAAGCAGAAGA
ATTCCTGCTGAAATGGCATTGTGCAGCCCATTCTTTAGCATTCCTTTTGCCCCTCATAT

GCTGCTTCAAGAATACTAAAGCAACACTCCTGATATTAACCTACTACTCAGTTTTTGTG

GGCAAAAACAGNAGATCACATCCCATTTGTCTTTTTGNGTTCTCTTTGGCTGNTTAAGCANC AANAGTTTAGCACTTTAATTCATTGCTCTACCAAATGGTTTAGTTTGGAAATAGGGGTG

ANGTGGACAAGAAGNTTTTGNTTTAATCCCTTCAAAGCCAATTNAACTTGGTTTTTGGT

TTAGGTNGAGGAAGGCCANGNANTNGTTCAAAGGTAGGCCTCAATGNAACCGTTTACCCCCCN

Sequence 377

GCGGTGGCGGCCGACGAGGAGACGGTGCTGTGCTGTGTATGAAGACGGCAGTGAATGA CTCTGCCAACAGAGGCCATGTGGAAGTGTTACATCACCTTTTGCTTGGAAAGATTTACTA AGAAGTCAAATAGTGGGTTCCTTAGAGGGAAGAGGTTGGAAAGAACCATGACTGTATTCA GGAAGGCACATGAACTGAAGCTTCTGTCAGAATGCCAATACAAGCAGTTGAGTGTTTCGT TGCTGTGTTATAAC

Т

Sequence 378

TCCGCCGGGCAGGTACCAGGTGGTGAAACCAACTGCTGAACGCACAGCCTACCTCCTGT
ATTACCGCCGAGTGGACCTGCTGTAAACCCTGTGTGCCGCTGNTGTGTGCGCCCAGTTGC
CCGCTTNGTAGGACACCACCTCACACTCACTTCCCGNCTCTCTTTAGTTGGCNCTTTAGA
GAGAAACTCTTTCTCCCTTTGCAAAAATGGGCTAGAATGAAAAGGAGTATGCCNTTGGGG
TTCGTGCACAACACACACACTCCTGATTGACTCTAACTTTCCAAATCAAAATTCATTTGGT

GAAACANGACTTGTTTGCTTGGATTTTAGNAAAATACACAAAAACCCCATAATTNCTGAA ACAAATTGCTTGANTCCTGGAGATNAAGGAAAGNTGGGATTTNGATTCCCCAAGTCCTCA TTGCTTAAGTAGGAATAAAATCCTTGCACCCATGCNAACAACCAACTTNGTAAATTTNGG TGAAAAANTGAAAATTTTAANTCTTNTCCTTTAAAAAAAAAGAAAAA

Sequence 379

GAGGGACTGCTAGCCAGCCAATAAAATATAAACTCCATTTGTCTTAGTTATATAGAACTG TGTTTCCAGCTTAGAAAAAGTCAAACCAATGACTTNTAGAACAANCTACTCTCATTTTT

ATTCAGCCTCTAGAACATGGAAGCTTTAAAAGTGAATTGGCTAAANAGGCAAGACCTTCT GAAAGTTAACATCTTAATGATTAAAAACAGTAAGTACGCACAACCGAAGCCGTAGAGTCA CACTTGCAACAAAAGGTTACAANTATTGCTAATGGGGCTCTGTCCGGTNCTGCTTGTCCA GCTGGACCATCTATTTCATCCCTCCTCTCTTGAGCTGTCATTTTAATTGC Sequence 380

NCCGAGGTACGTTAGCTCATTTTCCCTTAAGCGGGTTGTGACGTACGNTGAAATTGCAAA CGCTCAAACTTCCAACACTTGCGTATACACTTGTAAACCCAGCTTTGNNAAGTGAGACAC GCATCAAAATCATGATGAACAATTGACCGGCTGCNTNGCAGTCAAGCAGTTGGGTTA Sequence 381

CCGCGGTGGCGGCCGAGGTACACCATGTGAAGACTGGACTTAAACAGCTACACCACAGA AGCCGAGAGAGAGGCTGGAACATAGCCTTCCCTTTGGAGGTAGCCTGGCCCGGNGGGCAC

TGTGATCTCAGACTTCCAGCCTTCAGAACTGTGAGACAATATTTTATTGTTTAAGCCAC

TATTTTTTGGTACCTGCCCG

Sequence 382

GGCCCAGGCTGGAGTGCAACGACACGATCTCAGCTCACTGCAGGGCTNTGCCTCCTAGGT
TCAAGCTATTCTCCCTCCTCAGCCTCCCAAGTAGCTGGGATCACAGGCATGCACCACC
CNCCCNGGCAAATGTTTTTTTTGGATGTTTAAGNCNGACGTGGAGTTTCTCCATGTTGGC
CAAGGCTGGTCTCAAACTCCCTGACCTCAAGGGNGATCCACCNTGTCTCAGCCTTCCAAA
GNGCNTGGGGATTTATAGGCNATGGAACCAATNAACGCCCGGGCCGGCAATAAATTTGTT
ATACANNACTACCATGNAGTTAAATCTGCNANTANNATTGGGACCGAATGGTNTAATCCC
TTCNTACTTCTTTAAATTNTTCCCAANNGGACCTTCAATTAATAATAATAAAAAATTNGGA
TCCTNTTTTTTTAAAATGA

Sequence 383

CTGCCGAGGTACTCACAGTCACNCAAATTCNGNGGGTGGNTACACGGCTCTCCATTCTTC
TTCTTGGCTTTACAGGTTCCCAGGNCAAGAGCTTTACCCATAATTAAGNGNNTTCTGAGG
ATNATCCGNTACATAAACNACACCTCCTCTNGAACCATCCTTGGGGCCTTCATGGGGGTT
GGGCATTTNAGGNATCCCTTACNAACAAGNCCCCCNTGGTGNCGGNCTTTCCCAGAAGCG
GCCTTTGGTGNAACCTTCNTCCCCAAAATAAANAAACCAAGGGACAACAACATTTGNGGT
CANNNGGTNACCGAAANGAATCAATTTCAATTTTCCAATATGCNTCGAAAGGGGTTTTTC
CCACTTATTNCACACCTTCTTGNGGGCCNNGAACCCTTTCTTTCAAATATTAANCCCC

TTTTTCCCTTTTGAANCCTGGAAGAACAAGGTCTTGGAATCCAANTTTTTTCCGGGGN CN

NCTCCTAAAAAACTAANNNNGGAATNCCCCCCCCGGGCCTGCAAGGGGAAATTTCCNNTA NTCAAAAGCTTTAATCTNATTACCCCNTCCAACCCTTCCAAAGG

Sequence 384

AGACTGCAGGAGATGTGGGCCGTGCCAAAGAGATGATGAGACTGTTGCTGAGTTCATCA
AGAGGACCATCTTGAAAATCCCCATGAATGAACTGACAACAATCCTGAAGGCCTGGGATT
TTTTGTCTGAAAATCAACTGCAGACTGTAAATTTCCGACAGAGAAAGGAATCTGTAGTTC
AGCACTTGATCCATCTGTGTGAGGAAAAGCGTGCAAGTATCAGTGATGCTGCCCTGTTAG
ACATCATTTATATGCAATTTCATCAGCACCAGAAAGTTTGGGATGTTTTTCAGATGAGT

AAGGACCAGGTGAAGATGTTTGACCTTTTTGATATGAAACAATTTAAAA
Sequence 385

GTACTCCGTCTCAGAGGANGGGATGCAAATCTTCGTGAAGACACTCACTGGCAAGACCAT CACCCTTGAGGTCGAGCCCAGTGACACTATCGAGAACGTCAAAGCAAAGATCCAAGACAA GGAAGGCATTCCTCCTGACCAGCANGAGNGTTGATCTTTGCCGNGAAAAGCACGCTGNGA AAGATGGGNGCCGCCACCCTGTGCTTGNACNTANCAACAATCCCATGAAAGGAGGTCTAC NCCTGGCACCCTTGG

Sequence 386

CTTTTGAAGGCCCCGNTCGCCCGGGCAGGTACTCCCTGATAAAGGGGAATTTCCATGCCG
TCTACAGGGATGACCTGAAGAAATTGCTAGAGACCGAGTGTCCTCAGTATATCAGGAAAA
AGGGTGCAGACGTCTGGTTCAAAGAGTTGGATATCAACACTGATGGTGCAGTTAACTTCA
GGAGTCCTCATTCTGGTGATAAAGATGGGCCGTGGCAGCCCCACAAAAAAAGCCATGAAGA
AAGCCACAAAGAGTAGCTGAGTTACTGGGCCCCAGAGGCTGGGCCCCTGGACATGTACTCT
CAGAATGTTTGTCATATGCTTCTTGCAATGCATATTTTTTAATCTCAAACGTTTCAATAA

AACCATTTTCAGATATAAAGAGAATTACTTCAAATTNGAGTAATTCAGAAAAAACTCA

GAATTTAAGTTAAAAAGTGGTTTGGACTTGGGAACAGGACTTTTATACCTCTTTTACTG

**AACAAGTACCTCGGCCCGCTCTAGAACTAGTG** 

Sequence 387

TCCTGTATTGCCTTTTTAATCTTGCTTGTTTAAGNACNTTTCAGGGATTGTCATCATTG

Α

TCATCTGTAAAATTGTCAAGNACTAAGGTCCTAAACCTTAATC

Sequence 388

CCTTCCCNCCCNGCGAGNCCGCNGGGGAGATAAAAATATCACCAACATAATATANCACGG ACTAACCCCTAAACCTTCTGCNTAATGAATTAACNAGAAATANGGGGGGCAAGGAGNGCC ANAGCTAANACCCCCTNAACCAGACGAGCTACNTAAGAACAGGTA

Sequence 389

AGTACNCGGGGCTTTTCTCAGGCGGNGGCATGGCGGACAGGAGGATCCGGTGCANCGGN AGATTCACCAGGACTGGGCTAACCGGGAGTCGGCCGCTCTAGGGGN Sequence 391

CGCCGAGGTACGCGGGATGGGATTTCTGACCATTTGCCCTGCCTCTTGCAAAATAGGTCT
AATGGCAGGATGGTGTCATAATTAAGGCTACCAAGACTGCCCATTGTTCCAGGCTGGGCA
GTTCATAATGGGGGCAGACAATAGTGCAAAAAAATTTTACATTTTATCTTTAGAGTGTC

CAATAATAAATTCCTTTTCATGAATTCCCTTCA

Sequence 392

AGCGCGGGAGAGGCCGGTTTGCAGTATTGGGCGCTCTTCCGCTTTCCTCGCTCACTTGA CTCGCTGCGCTCGGGTCGTTCGGCCTGCCGGCCGAGNCGGTNATTCAGCTTCACTCAAAA GGGCGGTAATTACCGGTTTATTCCACCAGGAATCAAGGNNGGATAAACGCAGGGAAAAGA ACATGTNTAGTCAAAANAGGCCAAGCNNAAAGGCCCAGGNAACCCGTTAAAAAAAGGCCCG CGTTGCTTGGCGGTTTTTTCCATAAGGGCTCC

Sequence 393

NATTGGAGCTCCCGCGGTGGCGGCCGCCCGGGCAGGTACAGGACACAGGCACTCCTTTG TCTGGTAGAGAGGAGGAGGGGAAATGGAGCTATTCCAGGATACAAGGGATGGCACTGAGG GATGCATAAGTCCCCTGCCTCCCTTGTCTCAACATGTTCTCCTCTGCCAGCCCAGTCAGC

C Sequence 394

GTGGCGGCCGAGGTACCAGGCTGCGACAGGTGCTACCAGGAGTGGGCTGAGGGGAGAAA
AACTATCTCCCACTCTTTTGGCCCAGGCAATGTCAACGACTTCCACATTCCCTGGCCCAC
TTGCTGAGCAACCCCAGGTTCGGCTCTGTATAAGGACCCTCCCCTNCCAACCCCCAACCCC
AGAGTGCAGTGCAAATCAACCAACAATTTACTGGTGGAATGGCAATCAAAGGAAACAGTT
AAACACCAAACAATTNCTTAAAGCCAAAAAATATTTTTCATGGAGTTGAACATTTTTCG

GTGTGTTTTTTCAAGTGTAAAAGCAGTGACATTTTGTTCAAACAGAAGCAGCATCTAGG AATTCTGGCACTTGGGGTTCTAAGGGGGTTACAGGTATGCCATCATGGATTCTTCTCC C

Sequence 395

NGGGGCCGGGCCCCGGNGGGGTTANCCTTTCCATTTTTNANCAACCTTTTAAAAGCCCT
TGGGGAGGGNGGGGTTTAANGGGGAATCCCTTTNAAAATTTTTTAAATNTTNAAAAAGGG
CCCCCATTAAGNAATTTCCCAAGGTTTTTNAAGCCTTTTTTAAACCCCTNAAGNACCAGG
GNAAAAAGGTNGGAAAAAAGGGCCANTTTTTTTTACCAAAGGGNGGGGGGAGNGGAAGGG
CCAAANTGGGAAGAAAAATTAAAANGGGCAAAACCAAGGAATTANATTACCGTTCCAAA
AAAGCNTGGGGAAACCAAGGGGGGCAGGAAAATTCAAGNAAACCGTTGGTCCTTGGGCCT
TATTCAAGCCTTTTTTTGGTTTTTTTTTGGACCTTAAAAAGGGCCCCAAACCCCTT

TTTTTAATTTCCCTCCTTGGGAATNGGGGTTCCTGGCCAAGNACCCCAAAAGGTTTCCAA
GGGAAAATTTTTTAAGGGCCCAAAAAAAGGGGAATTTTTCCCCCCAAAAAATNGGGGNATT
CCCCCCTTAATTAACCAATTCTTTCNAAAGGAAAAGGGAATTANCCAAGGGGGTTTTGGG
AAGGNAAAAGGGAAAANGGCCCCCNNCCAAGNAAAGGGGNCCTTTTGGGTGGGAATTGGG
AAAACCCCCAAAAAAAAAGGAAAAATTCCNTTTTTTAAAAAAAAGGGAAAAANGGGGGGTTN
TTNCCTTTCNAAAAAAAATTGGCCCAATTTNGGTTCCCAAGGGTNAAGGNAATTTTTTTTG

G GGGTTNAAAACCTTTGGGGGCCAANGGGGGGGAAAAAAAACCCTTTTGGGTTCCTTTGGG GGGGNAAG

Sequence 396

AA

Sequence 397

Sequence 398

GCGCCGGGTACAAATTTAGAGGTTTCCCCTTTATCAACAAGAGACCCAGGTGCCAGCA TGTTACTACCAGATCCAGTTCTTCTTAGGACAGTGTGGCTCAAAGGGATGAGACCTTCCA GACACTGGTATCTGAGCATCTGTGGCCTGCCCCTGAGTTGTCAAGATAATTTCTTATCTC TGAAGGAGTCCAGACAGGAATGCTTCCACTGCTGGGTGGTGCTCGCCCCTCTTGCTCCT TAAGCGCCCGGCTCACCCCCTTGCTAGCACAGGGTGTCTTACACAGTTTATGGGACTTTT CTGTGAACTACCTGAGGGCAAGAACCATGTNCCACTCCCTGCTTGCTCCTCAAATATTTT A

Sequence 399

CNGCCGAGGTACNCGGGGAGAGAGGAAAAGAACACAGATCTCGCATGGTTCAGATTTTTC
TTTTTAGGTCCAGGAGTAAGATATCATACNGAAAATGAAAATTATAATTCTTCTTGG
A

TTCCTGGGAGCCACATTGTCAGCCCCACTTATCCCACAGCGTCTCATGTCTGCCAGCAAT
AGCAATTGAGCTTACTTCTTAATCTTTAATAATGGGTCAACTTTTGCCACTACAAACTT
C

AGGGGCCCACTTAATTCATGGANTCCACCTTTCTCTGGGAATTTTACAACAGCAGCAGCA GGCTCAAATTCCAGGACTCTCCCAGTTCTCTTTATCAGCTCTAGACCAGTTTGCCTGGAA CTGCTCCCAAAATCAGAATACCCTTAACCAGGGAAGAGGCCAGTTTTGGNCCCAAAGGGA GCCCCAAGGCAAGGGCCAAGGTTNGAATCCCNTTAACNGNNTTTAAAAACAACCCGCCTT TAAGAACACAAACCCAGGNCCCCCANGACACCGTTGAATGCCCCTTATTGTTATTTCTTC CC

Sequence 400

GACAGACAGTGCTTGATGTTCATAAAAAATACAATGCCCTGGTAATGTCTGCATTCAACA
ATGACGCTGGCTTTGTGGCTGCTCTTGATAAGGCTTGTGGTCGCTTCATAAACAACAACG
CGGTTACCAAGATGGCCCAATCATCCAGTAAATCCCCTGAGTTGCTGGCTCGATACTGTG
ACTCCTTGTTGAAGAAAAGTTCCAAGAACCCAGAGGAGGCAAGAACTAGAAGACACACTC
AATCAAGTGATGGTTGTCTTCAAGTACCTGCCCGGGCGGTCGAGCGCNCGCCCGGGCAG
GTACGCGGGGGCTAACCAGGCCAGTGACAGAAATGGATTCGAAATACCAGTGTGTAAAGC
TGAATGATGGTCACTTCATGCCTGTCCTGGGATTTGGCACCTATGCGCCTGCAGAGGTTC
CTAAAAAG

Sequence 401

CGGTGGCGGCCGGTTGCCTTGTATGTCACGAGCAATTAGGAGAGTCACGAGGATGAAATA
GATGAACCCGACCATGCAGTTAATCACCAACATCAACTACTAGCCAGACGGGATGAACCA

## **GGGACATTAGGCTTTTTTTT**

## Sequence 402

ATTGGAGCTCCCGCGGTGGCGGCCGCCCGGGCAGGTACACATATCCTCTGTGGGAAAAA
CTGCTCTCAGAGTGTGCACTCTCCCCACAAGCCAGCGCTCAAACTGGAAAAAGTATCTCA
ATGTCCTGAATGTGGGAAAACCTTTAGCCGAAGTTCTTATCTTGTTCGGCATCAAAGAAT
CCACACAGGCGAGAAGCCTCACAAGTGCAGTGAGTGCGGGAAGGGCTTTAGTGAGCGCTC
CAACCTCACTGCCCACCTACGAACTCACACAGGGGAGAGCCCTATCAGTGTGGGCAATG
TGGGAAAAGCTTCAACCAGAGTTCCAGCCTCATTGTCCACCAGAGGACCCATACCGGGA
AAAGCCTTACCAGTGCATTGTCTGTGGAAAGAGATTCAACAACAGTTCCCAGTTCAGTGC
TCACCGGC

#### Sequence 403

## Sequence 404

CCGCCCGGGCAGGTACGGACGCCCAGGGATCCGCGCCGAAGCTAGCACGCANCCTACCCA
ACAGTCTACACAGCNCGACCAAAGCCCCCGCGTACCCAGAGGAGTCGCTGGTGATNGGGG
AGCTCAACCCTGTTNAGTAGCTCTGCTCATCAAGTGTCTGGAGAAGGAGGTTGCGGCATT
GTGCAGATACACACCCCGNAGGAACATCCCTCCTTATTTTGTGGCTTTCGTGCCACAGGA
AGAAGAGTTGGATTGACCAGGAAAATTNAGGTGACTTCTCCANGGCTTTCCAGCTTGGTC
TTTTT

## Sequence 405

TG CGGGGTNTGTGTTTCTTGGTAAGAACTCNATGGAAACAGGCCTCCTT

## Sequence 406

Α

Sequence 407

GTGGCGGCCGGTGTGCTCATCGTAGCCTCGGGTCGGGGGATGCGTCTCCGCTTTAGCGCC
AAGATAGAACTTCCTCAGACCACCGCCGCCGCCGCCGCGTACCT

Sequence 408

GTACCTCCCTGGCTGAAGTCTCTACATAGCTCTCAGGAACCTTCGGAAAGGCATCCAACT CTTTTACCAAACTTAAAGTTTTTTTCCGATTCAGTCGCCTCATCTTCAGGAAAACCTTC

TCTTCCTTCATATAGTCATGCTTGTGTTATGGTCCCAGCCTACCGCCATGTTTTACAGA

GCCCGGGTCGCCGGGGCTCCCGCGTACCTGCCCGGGCGGCCGCTCGAGGCAGGTACTGAA
TGACACATTACCTCCACACTCTCCCGGACTAGG NGTCAACAGGGCCACAGGGTTGCTTT
CTGTCTTTGGTGGGGCAGGGGAGTTGACAGGGATGAGGGTCCAAGGAATTAAGCATGGAA
TGACAAGAAAACANGGGAAAGAGTTACCCTGTCACATAGTAGGTTAACTTTTTTAAGGGT
TTGCAAGTAAGAGGNNTTTCGACCCTTTCNCTTGGCTGAGCCANATCNCGGGAACTTGAG
AGCTTTTACTGGGATTTTCAATNNAAAAAATTAACAACAATGTCAAACTNGGGTTTGGA

Sequence 409

TTTTNGGGGGGAGTTAAATAAAATAAGCATGTCTNCATCCTTTATTCCTAAACATTTAC

TATGACAAATGTAANNACTGACAGAAATTTGAAAAATACCANGACACTTCTTAAATGATT
TCCCTTGGTTCAAAATTTACCCCTTCTTGGGTTTCTNTTGCTTTTCAAGGGTAATNTAA

CTCTTCTCTTTTTANGTTTGAACTATGCAAGTGCCAAAGGATTCCNCTGTAGTCTTTCC

AAGGGGGGAAAGGGGGTNTATANAAAAAAAAAAAAAAACACCTT

Sequence 410

Sequence 411

GGTACGCGGGGTGCTGGGATNCAGGCACGAGCCAGTGCGCCCAGCTGCCTNTGTTTNTTT
TATTAGCTGNTCTGGACTGNGGGGGCTCCTTGGGCAGATGCTGTATTATGGGGATAAGCCA
CACACTTTNTGAACTGGCCCGGTCAGGGGGGACATANCCATTTCCTGTGCCCCCCATCAA
NACCCACCTATTCTGAGNGTNNGCTCCTCCCCTGCTTGAGTNATGGCCACANATCTTGGC
TCGGNNCTCCTAAGCTGCATGNTGAATTCCTGGGACAACAAGACTGGCTTGTGTTCCAT
TCTCCAGATCCTTGGGT

Sequence 412

GCCGGGCAGGTACTTAGAGTTTTCCAAGTATGTTCTAAGCACAGAAGTTTCTAAATGGGG CCAAAATTCAGACTTGAGTATGTTCTTTGAATACCTTAAGAAGTTACAATTAGCCGGGCA TGGTGGCCCGTGCCCGTAGTCCCAGCTACTTGAGAGGCTGAGGCAGGAGAATCACTTCAA CCCAGGAGGTGGAGGTTACAGTGAGCAGAGATCGTGCCACTCCAGCCTGGGTGAC AAGAGAGACTTGTCTCCAAAAAAAAGTTACACCTAGGTGTGAATTTTGGCACAAAGGAG TGACAAACTTATAGTTAAAAGCTGAATAACTTCAGTGTGTATAAAACCGTGGTTTTTA

GCTATGTTTGTGATTGCTGAAAAGAATTCTAGTTTACCTCAAAATCCTTCTCTTTCCCC

Α

**AATTAAGTGCCTGGCCAGCTGTCATAAATTACATATTCCTTTTGGG** 

Sequence 413

Sequence 414

Sequence 415

ACCGAAGACGAANGCCACTACATGCCCCGCGTACCTGCCCGGGCGGGCCAAAGGCCAAC AAGGGNAGTGGGGNCGGGCTGCANGAATTTCGATATCAAGCTTATNGATACANGTTGACC TCNAG

Sequence 416

Sequence 417

### TTTTTTTTTTTTTTTTGGGNG

Sequence 418

CGCGGTGGCGGCCCGAGGTACGCGGGATTTTGAATGAATTCTCAACAAAATGTGCTAGCC
ACTGGGGACGCAAAACAAGTAAGATCCCTGTTGCAAGAAATTCATTTTATNGNGAGGGAG
GTTGGCATGGAGACTAAAATTCTCAGGAAAATGAGATCCGTGTTAGATTAGAAGTCCTGA
TGTGAAATGGGAGGACTCAGGAAGGAGGATCGTCTTTACCTGAGGATTTCTAGCCAGAGG
TCCCAGATGCCTGGGCTGAGAACCCAGCGATAAGGGGGCGTTCCCAAAGCAGACACAGGG
ATAAGAACAGAGGAGGCAGCAGTTGCACAAGCCCCAGGCACAGTGGCAGTTAGGATGG
CTGGAGAGTAGGATAGTTCTATGGGTTGCCCAAAAAATGTGATGTGCTTCATGTTTTCTC
TGACTCATGGATCTGGTAGAGACCATAGACATGATATAGGACTAACTTGCCCATTTTTCA
CANAGAGGAAACCATCCTTATGACTTACCTTAAAGTTTTTTGTTCTGTTTTTGAAAAGGAA

CCATGTGCTTCATGAAACCTACAGTTGGCCAGAAGAATGNTCCTGCCCCGGCCGGCCGCT CTAAAACTAGGGGGATCCCCCGGCTGCAAGGAATTCGATTTCAAAGCTTATNGATTCCCG NCACCTCGAGGGGG

Sequence 419

TNTGAGCACAGCTTTCAACAAAAACTTTGCATACCCCGCGTACCTGCCCGGGCGGCCGCT CGAGGTACTTCTCTGAGCATTGGCCTCTGGCTGGGATTATGCTTCAACAGTCTTGAAATG AGGTCCCTGGCTCCCTCTGTTACAAAGTCAGGGAATGTGAATTCAACCCGTGATATTCTT TTGTAGGTCTCTTGGTATGTGTTTGCCTCAAAAGGAGGCTTCCCAACTAAAAATTCATAG CAAAGAACTCCAAGGCTCCAAGAGATCCACCTTCTCATCATGCATCCACCTTCAATCATT TCANGGGGCANGGAGTCCAAGGTGCCACAAAGAGNGGTCCTTCTGGGAAGATGGAGCATG TACCTCGGGCCCTCTAGNACTAGTGGAT

Sequence 420

GAGGTACGCGGGGGTCGCCCATTTTGTCTCGGCAGCGGTGGCCCGTAGCTCCATCGCA TTTTATGTTTCTGGCGAGAAGGGAACGGAGTTTTCATCAGGTAGATTGGTTTTTGT Sequence 421

GGGCGCCGCCCTNCCCGTGAAAGACCTCCTGCTGGAAGACCTCCAGGATGAGAAG
TGAGGCTGGGTGGCTCCCTGCGAGGGGCATTCAGCAACAATGAGAGAATTAAAAACTTCT
TCAGAGTCAGTTTCAAAAATGGATCCCAAAGTCAGACCCACTCGCTACAAGCCAATGACA
CTTTCAACAAACAGCAGNGGCTTAACTGTATTCGTCAAGCCAAAGAAACAGTTTTGTGTG
CTGCCGGGCAAGCTGGGTGCTTGACTCCGAGGGATCGTTCCTAAATCCCACCACCGGA
GCAGAGAGCTACAGGGAGAAACAAAACTTGAGCAGATGGACCAATCGGACAGTGAGTCAG
ACTGTAGTATGGACACNAGTGAGGTCAGCCTCGACTGTGAGCGCATGGAACAGACAT
CTTTCTGTGGAAACAGCAGGCACGGTGAAAGTAACCGTCTGACAGAAAGCATGTGCACTT
CNGGAAGCAGGCCTGCATCTTACCTGTACCTGCCC

N

Sequence 422

Т

# Sequence 423

# Sequence 424

CCGCGGTGGCGGCCGAGGTACTGCCGAGCCGCTCCTCCCGCAGCTGTGCCGCCTCCTTGT CCTCCTCCTCATTGTCACTGCCAAACAGGTCAATGTCATCATCCTCGTCATCCTCTGC TG

GTGTGGCTGGCTTCCAAGCTGGTGCCCGTGGGCTACCGGAAGCTACAGATTCAG TGTGTGGTGGAGACGACAAGGTGGGGACAGACTTGCTGGAGGAGGAGATCACCAAGTTT GAGGAGCACGTGCAGAGTGTCGATATCGCAGCTTTCAACAAGATCTGAAGCCTGAGTGTG GGTACCTGCCCG

### Sequence 425

CCTCCGCGGTGGCGGCCGAGGTACTAAGTGGTTAAGGATGGAAAAGAGCTAACAAGTGA CAACAAATACAAAATAAGCTTCTTCAACAAAGTATCCGGCCTTAAGATCATCAATGTAGC GCCGAGTGACAGTGGGGTATACAGTTTTGAGGTGCAGAACCCTGTTGGCAAAGACAGCTG CACAGCTTCATTGCAGGTTTCAGGTTGGTTGATTTCTTGGGCTTTTCCTTCATCATTAT

ATAATGTAGTTCCTGATTTTCATAAATGTATATGGGTTGTTACATCTTCTATAGGATAAC
ATGAGTCCGACATCTTCTGAATCAGCAAATTCAGAGGCAATACCATCTCAAGAAGCCACC

# Sequence 427

CCTCCTCGTGGGTTGATCGAAAATGTATAAAACTGACTGCTTCTCGCCAGCCTCAGACAA GAAAGAGTGAGCTGCTGGTACCTGCCCGGGCGGCCGTCTAAAACTAGGNGGGAT

GGCCAAATGCAGAAACGTCCCACATGCCCACCAGGAGCAAGCTTCAAAATGTTCAGCTTG
CGGGGCANTNNGCAGAGAAATNCCAGGGATGTTCCTGAAGGCCTNGATGATACCANTATC
CTCATTATAAGATGAATGCACGGGGCCCNTTGCGCTGGATACCGGCNAACCGGNTTCTNA
TTNTGCCTNTGNCAGCTCTCATTCGCTGAGAGGCATAGACCTTTTTGANGATCATTCCAA
NGCTATAAGTCNTCTTAAGGAGCAAAAACCAGCTTCCTTGGTCTNTCTTGAAGNCCTTCA
ACTTTATCTTTCAACTACCAAAGGGAAGGTNCAGGAAACTTTCCTCAATAACCGANGGAC
CTTTAGGACATGAACCAGGTGNCTGGNTAGGGGCTGGAGGCCAGCCCAGGGCAAGAAACA
NAATGGCCGATANCCGTTTTTTGGGGTTCCCGCGGTACCNTTGNCCCGGGNCGGGCCGGCT
TCTAANAAACCAAAGTGGGAANCCC

Sequence 429

GCAAGTTGTGAATATACTTGGGCTTTCTGTCTTTCCCCAAAAGCAATTTGGGATTATTT

CCTCCTTTTTTTCTGCATTTCATCATAAATACTGTCATATTCATACACAGTAGCATCTT
CTGCAAGGGCCTTCTGGATTTCCAGTTTGGTCTGTTTCATGGCCTGCTTCTTAGCAGC
TT

CCCTCTGAAGGCTTTCACTCACAGAGGTCTCATCATCATCATCAGAATCATTCCCAAACA CTGATGGTTTTTGCAAAACAGGGTGCAACTGCTGTGTTTTCTTTGGCAAAATAAGCCCAT ACTACCTGCCCG

Sequence 430

Sequence 431

Sequence 432

**TGA** 

GCGCCGAGGTACCACTGCTTCCCGGGACTCTGCGTTGTTACCACTGCTTCCCGGGACTC TGCGTTGTTACCACTGCTTACTGCGTTCCCAGCATTTCTTTTCTCTTCTCGTTTCCTGT

GATTCCGGCTAATGGTTTCCCCTGGCATTTGACTTCGTGATGTGTAACTGAGTCTCTTCC

TGAAGGGGGAAACGCATTCCAGAGCATTTGTTCGGGCTCATGTAGGAATAGATCTTTGAC TGCCCGGTAAATCCCGCGTACCTGCCCG

Sequence 433

GTTTCATTCTGTCACCCAGGCTGGAGTGCAGTTGTGCATTCATGGCTCACCACAGCTTGA ACCCCCAGGCTCAGGTGATCCTCTCACCTCAGCCTCCCCAGTAGCTGGGACTACAGGGGC ACACCATCAAGCCCCGGGTAATTTTTGAAATTTTTATAGAGACAGGATTTTACCATGTT

Sequence 434

NCGCGGTGGCGGCCGAGGTACTTTTCTAAAAGCTCATCCACTCTATCATTTAGATATCCA ATTTTCAGAATGTGCTCAACATTGGCCACTCCATCTGCCATTCTTAAGTCTCCTTGGG AG

CCCTATGAAAAATATAAATCTTTTGAACAGGCTTTAAAAAATTCTATTTGTTGGATTTTCA TATTTTGGAGCTCTTAATTGATGTCACTATTATTTCATCATATTTGTAAATACATCTTTG ATACTAGAGATCTCAAAGCACTTAAGTCCATCACCATTCACCATAGCTAAGAAGGGCTCGG AGAAGTAAATGATTTTTTAGATACTATTTTAAA

Sequence 435

CCCGCGGTGGCGCCCCGGGCAGGACGCGGGGGTTGCTCAAACCGAGTTCTGGAGAAC GCCATCAGCTCGCTGCTTAAAATTAAACCACAGGTTCCATTATGGGTCGACTTGATGGGA AAGTCATCATCCTGA

Sequence 436

GTGGCGCCGAGGTACGCGGGGGAACACCACCCAGTGTGGAGCAGCCCAGCCAAGCACTG
TCAGGAATCCTGGAAGCACCTCCAAGTGACTGCAGATCTGGAATAATAAGTGNGGGGTA
GATCTGCCCATAGAGCTCACTTTAGACCGGCCTATACTCCTACAAGGAATTGNGGTAGGG
ATCTTNTACTCATCCTTGGCACAATAAGAATGGCCAATGCCCTTTCTAGTTGTTTGGGGG
AAGGTCTTTGAAGGCACCATTTNCCCCCATCCCCTGGGGGAAGAAATGGGGTCCCTAAG
GTAACGCCANGGTTTTTTGGGGGTTNAATTTGCAAAAATCCCCTTTTTNGNGGGNTANNA
CACAAATGGGCTNGGCAATTTNTTTNTTTNCCCCAATTNGNTCAAAANGCCCAANAAAAT
TTTTTAACCGGGGTTGGGGGGGGGGAAAATTTTTTGGGCCANNTTGGCAATTCNCNGGG
ANAAAAAATTTCCCAANGGGGCCNGNNGTTCAANTTTCCTTNTAACCCCGTTTNAAACCT
TCNCCCCCCNGTTTNTTTTTTTTGGANCCCTTAAAAAAAACCATTTTTTGG

Sequence 437

ACAGAAAAAAATGGTTTCGTAAATAATTTGCCTATTTTGGTTAACATAGCACATGGAGAT AATCATCTGAAAGTTATAGGGCACTGCCACTGCTGAATCAAGAGCATGCCCAATATTTGA GGTGGCTCTGATTTCCTGGCAGCTGAACTCGGGTAGTCCAGTGGCCTAGCTGGTCCTGCC

Sequence 438

CGGGCAGGTACGCGGGGAGGTGCCGCTGTTGCTGCTCGTGTTGAATCTAGAACCGTAGCC

AGACATGGACTGGAGGACGAGCAAAAGATGCTTACCGAATCCGGAGATCCTGAGGAGGA GGAAGAGGAAGAGGAGGAATTAGTGGATCCCCTAACAACAAGTGAGAGCAATGCGAGC AGTTGGAGAAATGTGTAAAGGCCCGGGAGCGGCTAGAGCTCTGTGATGAGCCGTGTATCC TCTCCGATCACATACAGAAGAGGATTGCACCGGAGGGAGCTCTTTGGACTTCCTTGGCAT GCCGAGGGGACCCATTTGCGTGGGCCCACAAACNTCTTTAAACAACCTTGGAAATAAAAT GTGTGGGACTTTAAATTTCACCCCAANGTTCTTTCANTNAATTCCTGGGGGGCATTCAAG AAATAATTTTCTCTTTTATTGGGGTTNTTTGGGGAATNNTAACCCCTTCGGGGCCCCGG CT

TCTTAAGAAACCTTGNTGGGGGANTCCCCCNCGGGGNCTTGNCAAGGGAAATTTTTGGAT ATTCTAAGGCCTTTAATTCNGATTACCCCGNTTCTAANCCTTNGAANGGGGGGGGGNC Sequence 439

### Sequence 440

GGGGCGCCGAGGTACGCGGGATGTCTAAAATATCTTGTAAAAAGTGTTAAAATAAACAA ACCCAGTCAATTAAAAATTTTGACTGTTATTGAGAAAAACTCCAATGAGGGAAATAATAAG ATCTATAAAGGTCTTAAGAAAAATATAATTTGAAAAAAACATGTGGCTGAGTGTGGC TCACGCCTATAATCCCAGCACTTTGGGTGGCCTAGGTGGGCAGATTGCTCGAGTCCAGGA GTTTAAGACCAGCCTGGGCAACATGGCAAAACCCTGTCTCTACAAAAAATTAGCCAGGTG TGGTGGGACACGCCT

### Sequence 441

AGCATATCCCAGGCAAGCTCTAGGTTCCCAATCTCCTCCTCATTTTCTTGAAGAGAC
TTGGTTTCAAGGACTGAATCATTTGGCAT

### Sequence 442

Sequence 443

CCCGCGGTGGCCGAGGTACATGAGAGACACTTTAAGCAGGCTCACAGGAATAGAGTG AGTGCGGACTCAGATTGTTTAAGCTATCTCTGAACCCATTCCTACTGCGTTTAACTATT

TATTGGTTTCTAACTACTACCACAGACACGGATACCTCACAGGTTCCATTATTACTCAC

A
GCGTTGTGGTCCGGGTTCATCGCCATCCTGCTCCACGCTGTCATAATCCTCACGCATCCG
CGCTCGGGACCCCTCTTCTATAAGGGACATACACGAGATCACCGAAAACTCCTCCTTTCT
CCCATTGTTCCTATGAGGTGGGTGGGGACTCCAAAACCCGTAGCTCCTGCCCTACTAGGC
CACTCTACCCCATT

Sequence 444

GCTTAATGGAATTGTTATGGCTAAGCACATA\_JAAGGCCAAAAAAAGGAGTTTTTCAAACCC
AGCAAATCAAGTGCTTGGATTCTGAACTGCCAAAAGAAAACTGCACTTCCCCTCTTAAGT
AAAACCGAAATGAGTTTTCTTAGGTAAATGTATTCATCAAGCCCAGNATATAGAAAATAA
AACCCAGGTTANTGGTGNAGCCGTTTAGGTCACCTGCATCATTTTCCAGGGAAAGATTCA
AACCAAAAATACCAGTNCCCAGNCCAGGACTCACAATGTGTTGGANTAATATTATTATTA
AAAGCAAAAAGGAGGCCCCNCCCCCACCAAAGCCCAAGCAGCTGGGNTGGAAAATAATCAA
GGCCTGGTCCCACNCCCGTNGGGTAATGCCCAAATTCCGGGGGGAAAAATATACCTNCCC
TTTGGNAAAAAAACCTTGGGAAAGAAATTCTTACCCTTNGCCTTGGGGAAAAAAAAA
Sequence 445

TCCCCGCGGTGGCGGCCGGGCAGGTACTTTACTAAAATGACTGCATTCTTTGGATTCCTTCAGTCTATGGTTCAAGTCACTAAAGATTCATTTTTGTTGAGTCCTTATGAGAAACA

NAGTATGAATCTTGACGGTTTCTGCCCGTCCTAATGGCAGAGCTCTCTGACTTGGGTGTA TGCTACCAGGCTGGGTTCAAGTGAGAAGTTCTGGTCAGTCTTCTGTGGGTTGAAGGTTCA ATATCAATTCTGTTTCAAAGCCTTTGTGATGCTATTTGAATCTTTGCTCGGTATATGCC

CCCAGTGGGTCAAGTCTGGGACCTAGGTGGTGAGCTATCCCATAAGTTCATTCTCAAACC
GTCTTTACTGCACTGTTTAGGGTCAGATACNCATTATATACNACTTTGGGTGAGCT
CA

GGAGTTTATAAGCTTTATGGGCTTTGGTGTTTTGATTTATAAACAGGAGTTTATNGAAC

TTATGGGGTTTGCTTCCTCTTTCTGCCCAGGTTCCTTGGG

Sequence 446

GGTGGCGGCCGAGGTACGCGGGGAGACACAACTTCCTGGGCTTAGATATTTCAGAATATC
ACAACTAAACTCTTAAAAATTTCTGAAGGCTGGACACCGTGGCTCACACCTATAATCCCA
GCACTTTGGGAGGCTGAGGCAGGCAGATTGACTGAGGCTCAGGAGTTCAAAACCAGCCTGG
GCAACATGGCGTAACCTCGTCTCTACAAAAAATGCAAACATTTGCTGGGGCTTGGTGATGT
GTGCCTGCAGTCCCAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTAGAACCCATGAGG
TGTAGGCTGCAGTGAGTCATGTTTGCACCACTGCAGTCCAGCCTGGGTGACAGTGTGTAT
TAGTTTGTTTTCATGCTGCTGATAAAGACATACCTGAAACTGGGAACAGAAAGAGGTCTA
ATTGGNCTTACAG

Sequence 447

GGTGTTCTCAAGGCAATTAATAATGATTGTTTTAACACCAACAANAAAGAAAACTATTA

CACNAAAANTAAGGTNCCCTGCCCCGNGGCNGGNCCGCTTNCTANGAACTTAGGTGGGAT CCNCCCCGGGNCTGCAAGGGAAATTANGNATTATCCAAAGCCTTATTCGAATAACCCGTC CGAACCCTCANAAGGGGGGNGGCCCCCGGTATACNCCAAGCTTTTTTGGTTCCCCTTTTA AGTGGAGGGGTTAAANTGGCCGCCGCTTGGGCGTAAAATAAATGGGACNAATAAGCCTGG TTTTCCCTGNGGNGGANAAATTGGTTNTTCCCGCCTCACCAAATTCCCACCACNAAACAT TACCGAAGCCCGGGGGAGCCAATAAAAAGTTGGTANAAAGCCCTGGGG Sequence 448

GAGTCCATGTTGCCCAAACTGGTCTGGAACCACCACACCCAGCTAATTTTTGTGAATTGC
GGGTACCAGCACCGGCGCCGTCCTGGACTGCGCCTTCTACGATCCAACGCATGCCTGG
AGTGGAGGACTAGATCAATTGAAAATGCATGATTTGAACACTGATCAAGAAAATCTT
GTTGGGACCCATGATGCCCCTATCAGATGTGTTGAATACTGTCCAGAAGTGAATATGATG
GTCACTGG

Sequence 449

CGGCGGCCGAGGTACAAAAAGCAGGGGCCCAGCCCCAGCTGTTGGCTACATGAGTATTTA
GAGGAAGTAAGGTAGCAGGCAGTCCAGCCCTGATGTGGAGACACATGGGATTTTGGAAAT
CAGCTTCTGGAGGAATGCATGTCACAGGCGGGACTTTTTCANAGAGTGGTGCAGCGCCAG
ACATTTTGCACATAAGGCACCAAACAGCCCAGGACTGCCGAGACTCTGGCCGCCCGAAGG
AGCCTGCTTTGGTACCTGCCCGGGCGGCCGTCGATCTCCTTGTGTTCAAGCAACTTCTTG
CGGTAGTCCTGAAGCGCCTTATCTCTAGGGTCCGCCATGATGAGAACCCCGCGTACCTGC
CCG

Sequence 450

NGGTGGCGGCCGAGGTACTCCCTACGGCACTAGTCTACAGGGGGAAGGACGCTCTGTGCT GGCAGCGGTGGCTCACATGGCCTGTCTGCACTGTAACCACAGGCTGGGATGTAGCCAGGA CTTGGTCTCCTTCCCGCGTCAAGAGATAGAAAGACCAGTCCTTGTGAAAGACAAGTCTGA ATGCTCCACTTTTTCAATTCTCTCCATTCTTCAGTAAGTCAACTTCAATGTCGGATG

ATGAAACCCAGACACATAGCAATTCAGGAAATTTGACTTTCCATTCTCTGCTGGATGACG TGAGTAAACCTGAATCTTTGGAGTACCTGCCCG

Sequence 451

CAGTTTTAGGAGAAAAATTCACAGAAAAGTCAGATTGTAGATTTTGAGAAGGAAACTCTG AGGTGGTGATTTTCTCCAAGGTCATGGTTATGAAGCTCAATGAGGGCCTGAATTGCTTCT TCCACAGATCCCAATTGAATGAGCGCCATTTTGCGATCTTTCTGAAAGAATTTAAAA Sequence 452

GGGGCGCCGCTAATGTNAGAAGTTAAGTNAGAACCTATATTGTACGAGGAACAAAAGCC AATCAGTGTCCTTTTTTTTACATAAACTTTTACTACAAAAATTNATATATGGA TTTTGAATTTCCAGTCAAACCAAATTGTAAAACTGTTTCATTTTGGTTCTATATTATGTAT

ACATAATTTATCTATTATATTTTACATTAAAATATATGCATATATAATGGATTTAATTT CCTTTNGGNACCCCCATATNTAGAAGNNTCTTCATAANTTAATAAATAATCTAGGGCCAG CATTATGTTTGCTAGACCTGGNTTTGGCTCAATACTTAAAGTTTAAAAGTTTCTGTCTTT

TTCTTGGACTTGAAACTGCCTANAGCGTCAGCCTCTCTGTTATTTNTNTCTATTTNCTT

TTCCCCCATCAGTCTTTTAGCCACTTGAAGCCAAAATTCTTAGTTTCTGTCCTAGTNGA

**AAGAGTAAAAGGGGAAGGAG** 

Sequence 453

ACGGATACCCTGTTCCGCCTTTCTCCCTTCGGGAAAGCCGTGGCGCNTTTCTCATAGGCT CACGGCTGNAAGGTAATCTCAGNTTCCGGTGTAAGGTTCGTTCGGCTCCAAGNCTGGGCC TGTTGTGGCACCGAACCCCCCGGTTTCAAGCNCCGAACCCGGCNTGCGGCCCTTATCCC GGGTAACCTATACGTCTTTGAGGTCCCAACCCCGG

Sequence 454

NGAAGGCGACGCCGGNCAGGTACGCGGGGACCTTTNACGGGCGGGGGAGCTGAGGCT
CCTGNCGNTATCTNTGATCCTTGCACCCTGGCAGGAGANTGGTAGGGGGNACTNTAACGG
GAGGNCTNCACATATTGCAGAAAAGAAACCACTTTGGNGNGTAAGACTTGGAAGAAAGTA
ACCGGTCACTTTGGAAAACAGGGGTGGGGAAGAAGCTGCCTCTCTTTTTGAACCTNTTCCN
AGGACCAANTCTAACCCAGGTGAGGNNAACCNTGGTNGATGTAAAGCCGGTGGCTTTGG
AGGACAGAATCATCTAAGTGGGAANAAGATACACTAGGAAGGGNGCTGGGGGGANTACCA
TCAAGAGGGAGGNGGGGATNACCTTCAGGCCGGGGGCTTNCGGNGGGGATGAAAGAAGAA
ATGGGNCCGGACAGGTTTGNGGGTNGGAGGGTATGAAGGCTTGGCNAAATGGTGGGGAAT
TTTGGTAACNTTCGGGCCGGGTTTTTAGAANCTNAGGGGGGGANTCCCCCGGGGCTNGGA
AGGGGAAATTTTCGANTAATGCAAGGCTTAATANGAATTACNCGGGGGGACACTTCGGAG
GGGGGGGG

Sequence 455

Sequence 456

CGGCCGAGNACAACATGACATTTTTAACCAATCCAATCTAAAAATGTTGCCAGAATCCAC
CTGTGGCCCNGAATCGNGTNTTGGTTCCTCTTTCTACTCCNCTGCAGANGACCAAACCTG
TCCCGCTGCCACTTTCCTCACTGATATTGGGAGGAGGGCAAGGCCCAGCCGAAGTTCCAC
TAAAAATGCCCCAGGAGAATAGGCACCNGGCTGGCTTGCCAAAGGGTTTNGGGTTTTATT
GCTTTCTGTTTTTCTTTTCCCCGACAGCACAAAGAANGTAAAGGGGCAGTTAATTGGAC
AGAGTGTTATTTTAAAACATCTCTAATTGTAAATGNAATGTGGTTGGTTTGGGTTTCTA

TGCAATTGGTGNGAAGCCATGCCGGNGGGGAAAGAAGAAACNTGACCCCAAGGNTAATTG AAAATNGGGAGNCCCCCTTTC

Sequence 457

NCGATATTACTGTGCGAGAGGTAAAGGATATAGTGGCTACGATTACNGCCTCTCT Sequence 458

CCCCGCGGTGGCCGCCCGGGCAGGTACACGACAAAACTACAGACTTAGTCTGGTGGA CTGGACTAATTACTTGAAGGATTTAGATAGAGTATTTTGCACTGCTGAAGAGTCACTATGA 82

# Table 1

GCAAAATAAAACAAATAAGACTCAAACTGCTCAAAGTGACGGGTTCTTGGTTGTCTCTGC
TGAGCACGCTGTGTCAATGGAGATGGCCTCTGCTGACTCAGATGAAGACCCAAGGCATAA
GGTTGGGAAAACACCTCATTTGACCTTGCCAGCTGACCTTCAAACCCTGCATTTGAACCG
ACCAACATTAAGTCCAGAGAGTAAACTTGAATGGAATAACCGACATTCCAGAAGTTAATC
ATTTGAATTCTGAACACTGGAGAAAAACCGAAAAATGGACGGGGCATGAAGAGACTAATC
ATCTGGAAACCGATTTTCAGTGGCGATGGCATGACAGAGCTAGAGCTCGGGCCCAG
Sequence 459

GGCGGCCGGGTACGAATGTGCAAATTAAAGCATGGTAAACTGATATTTACATAAATATCA
AACCAACAATTAGTTTATACATTGTCAATGACCTTCTAAGATATGTCATGAGTGGATCC

AGAATATCTTTCCCCCAATGGAGAAGGTATTCAGAGGCTAAATTCCGACACTTTAAAATG ACACACATCATAGGCTTTACCTGTTTGACCACTGCCTCAAATGTGTGAGATGTGATTT TA

Sequence 461

GAGTTTGAGAAAGCTGCAGAGGAGGTTAGGCACCTTAAGACCAAGCCATCGGATGAGGAG
ATGCTGTTCATCTATGGCCACTACAAACAAGCTACTGNGGGCGACNATAAAAACAAGAAC
GGCCCCGGGGATGTTGGACNTCACGGGGCAANGGCCAAGANTTGGANGCCTGGGAANGAG
CTGAAAGGGACTTCCAAGGAAAGNANGCCATGGAAAAGGCTNTACATCAACCAAAGTATG
NAAGAAGCCTAAAAGAAAAAAAAATACNGGGANTAATGAGAGCACNTGGATTTTGGGNTAC
NTGTGCCCCATGTGTTTTATTCCTAAACTGGAGNACAATTGCCTNGNNTTTTTTCTAAN

ACCCGNTGGAATGGTTGGGGAAATCTCTGGGGAAAAATAANCCAGNTAAAACCAGCTACC TCAAGGGCNTGCTCACCCATACCG

Sequence 462

Sequence 463

GCGATNCCCCTGGGAAGCTCCCTCGTGCGCTCNTCCTGNNCCGACCCTGCCGCTTACCC GGATACCTGTCCGCCTATTCTCCCTTCGGGAAAGCCGTGGGCGCTTTCTTCATAAGCCTC ACCGCTGTAGGNATCCTCAAGNTCGGGTGTAAGGNNCGTTCGCTCCAAGGCNGGGGCTGG NGGNGCACNGAACCCCCCCGNNCAAGACCCGACCCGGTGGCGCCTTAAACCCGGAAAACT

AATNCGNCNTGGAGGTCCCAAACCCCGGGGNAGGACACCGACTTATCCGGCCACCTGGGCAGGCAGCCAACTGGGGTAAACAAGGGATTAAGCAG

Sequence 464

Т

TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTAACNGCNGCCNCCNCCATGAAAGAGGG
GCCNCCACATNTTTATTGCATACNCAGGGGAATAACTTATTNTACAANGAACNCTCCTCC
ATTNGGAGACCATGCCCACTTACAGAATGCANCCGNAAATGCGGTAAATNTATTTACAGA
GGNTGGGNGCAAGATGAGANAAGTTTCANCCCCAGGAATTTGAAGNGAGAATGATCTAC
AAATTNTCCTGACAAGGNGCAACCGGGCTTGNGCTAGNGNGGNCTGAAANAATTCCTGGC
AAANCGTAGGGGGAGATTAAATCTCGGAATTGACAGCAAGTTTGGGGACAGNGCAAAAAN
AGAGGGGTGACCCTGTGAAATTTGGTGCCTGGGGGAACTTCTTGANGCCCCAATGNGGGG
GCACCNCTTNGAGANGATNGGGNTAAATTTANGGGGGGGATNTTTTAACCCCTNTCCNNCC
CCAACCAAAAAAGGG

### Sequence 465

Sequence 466
TGGCGGCCCGAGGTACGCGGGGAGGTCGGTGCGCGCTTCTCCCGAGGTGGAACGGCCGC
AGTCAAGCGCCGGCGTTCTCTGCCGTCACCCTTTCCTTGC

# Sequence 467

TCTTGCTCCATCACCCATGCTAGAGTGCAGTGGAGTGATCTCGGCTCACTGCAACTTCCG CCTTCTGGGTTCAAGCTATTCTCCTGCCTCAGCCTTCCAAGTAACTGGGATTACAGGCAC ATGCCACCACCCCAACTAATTTTGTATTTTTAATANAGACAGGGTTTGACCATGTTAG

CAGGCTGGTCTTGAACTTCCATCAGGNGATCTGCCCTCCTCAGCCTCCCAAGTGCTGAGA
TTACAGGCATGAGCCACCGCGCCTGGCTGATTGNGTTCCTTTCTCACAGATTTTGTTT
CT

GTTTTGTTTTCCTGAACACTCAGCTGGACTGCATTTCCCAGCTTCCCTTGCAGTTAA

CACAAGTAGCGCTGTGACTGGGTTCTGCCCGGTAGGAAGGTAAGCAGAAGTGAATGTGTA
TCACTTCTAATGGTGTGGGNCTCCCNAAACCTTCTAAAGGGGTATGTTCCCCCTTTTT
TT

Ť

# Sequence 468

TTGGAGCTCCCGCGGTGGCGNTCGGTGTGCTGNGCTCAGCTGCCTTCCNANGGAGGANC NGATCGGCNAGTGCTCTGACTGCGTGGCCGACAANNGCTGNCGNAGAAAGAAATNAAANC CCTGAAACATGACAGNGAGTGNTGNAAAGTGTGGAAATGCCTTCTTAAAGTTNATNAANG TNAANTCAAANNACATTTTTTTTTTCAAAAANATAAATTTAGAACTAANTGNACCTT

### Sequence 469

CGGAGGAGAATGGTATCACTCAGGCTCTCAGAGTGACACTGAAGCAAGACACTCATGGGG
TAGGACATGACCCTGCCAAGGAGTTCACAAACCACTGGTGGAATGAGCTCTTCAACAAGA
CTGCGGCCAACTTGGTAGTGGAAACTGGGCAGGATGGAGTACCTTCAGGATTGGCCTGTT
ATCTTCTTTAGAACTAAGTTCATCTTAAAAATTTAAGAAGGTGGACATTTCAACACCAT

ACTAGTCACTAGTAATTCGGTCACCAAGCAAATCAAGCCTGCAAGAAAGGAAAGCCAATAT TCAAAATGCCATGTTACCATCTAAACC

Sequence 470

TTGGAGCTCCCGGGTGGCGGCCGAGGTACTGATTTTATTGTCTACCTCTCTGGACTTG CTCCCAGCATCCGGACCAAAACCATCAGTGCCACAGCCACGACAGAAGCCGAACCGGAAG TTGACAACCTTCTGGTTTCAGATGCCACCCCAGACGGTTTCCAGTCTGTCCTGGACAGCT GATGAAGGGGTCTTCGACAATTTTGTTCTCAAAATCAGAGATACCAAAAAGCAGTCTGAG CCACTGGAAATAACCCTACTTGCCCCCGAACGTACCTGCCCG

Sequence 471

CAAAGATTCAGACCACAGCCTACAGGAGAGAGAGATTTCTGAGGATGGTGGTGCACTGTG
AGTCCACGCAGGCCTCCTGGGCATAGGATGGAGCAATTCTATCTCACCTCAGGCCTAGCA
CAAAGGGCTTCAGTAAACCACTGGAGTTTCCTTCATTAGGATTCCATCCCAGGATATCCA
GAGGACAAGAGGCTGGCCAACTGCAGGATTAGCCTATGCTCCCGTGCTGGATATAGGCTA
CACGCAAGAGAAAGCTTGGGTGGGATCTCCTGATCCCGCGTACCTGCCC
G

Sequence 472

GCCGGGCAGGTACTATGGGTGTAGTGNTACTATTACAGTTAATNCNTCCTTTGTAGTGCG CTGNTAAATGCAGTGAGGATTGGAGCACTGTCCACTGAGTCTCTGTGC Sequence 473

CAAAATAATTATAATGTATTAACTCATACTGCCTGTCTTTTATAGGGGAAAAAAATAAC

C TNTTTTATTTTAAAGTTATAAGGGGGNTTACCTTNTAGNGTGCTTGGATGACAGGGAA AT

TAGCCTACCCATTTTGGTCTGGAACAGAAGACTTTCAAATTTAATATGGNCCAAGTGTC
TTNACTANTTAAGGCAAGATCATGCTTNTGTCAGTTNACCCCANTGNTTGGAATACCGTG
NACACCGATCGTGGCTCGNCTACAGCCTCCATGTNCCCAGGCTTCGAGCAGGT
Sequence 474

TTTCGTTACAAAATTCAACAACAGAATCAATACTTTGCATAAACATTATGGATGCTTTTT
CTGTTTGTACCTCGGCCGCTCTAAAACTAAGTGGATCCCCCNGGCTTGCAGGAATTTCGA
TATTAAAGCNTTATCGATACCGGCGAACTCGAAGGGGGGGGGCCCCGGGACCCANCTTTT
GGT

Sequence 475

TTGANGCCCTCCCGCGGTGGCGACAGGGTTACATTGGTAAGGGTGACAGTTAGAAGGGG AAGTCCTTTTAGTGAAATAGATGAGAGGTTTTAGATCTGCACAAACCTTTTTCATGGAAG TCCAACTTTGCTCCTGGGTAGTTTAAAGGACGTAGTCCCATGTACCT

Sequence 476

NGGCTACACGCTAGGAACCTTGCAGCTTACAGTGACAGAGCTCCCATTCACGAGGCCACC ACTCATCTCGATTTCTGGATCTCTAGGGAATGAGTAGAGCTCCACCTGGATTCCCTTT TC

Sequence 477

TATTTATTAAAATGATTTTTTTAAGTTTGAACTTTATTGGAAGGAGTCCCTCTAATTCAC ACTTTCATCCTAGATAAATGGGTAAGAACCACATATGGAATATAAAGCATTGATTTTTT

AAAACCACATAGTAGCACAGTTGAAAGAAATGCAATTCTCCAGGGTCTTAGAGAATTCAA
AGGNGGCATCTTAGGGNGGGTCCTAAGGAAACCCAAATTACCAGGTCTCATGGGTTTTCC
TTTTGGGTTCAAGGATTAGAAAGGAGTCAGNGGTTACCCACCTACCCTGGTTTTTAGGA
GGGGTAGGAATATTGAAACCTTTCCTACTTAGTCCANCAGGTTTTACCTGGTTCAAGGGT
GGGNCCCCCAACCAAGGTTCTTTTTTTATCTTTCAAGCCCCCATTCTTTGGCCCTCTT
AA

**GNGGGGGGTGG** 

Sequence 478

Sequence 479

CTCCCGCGGTGGCGGCGAGGTACGCGGGGGGGTGTGGCCTGCATCTCAGCTGGCCGCCA TCAGNGTAAATAGAGCTTAAAGTCATGGTTTGGCTGCATAAAAATTTTCTAACTTGGGT

NAATATTTGTAGNTGAAGTATCTGCTTTCATTTTTTTCACGTTATAAATAAAAATACTAT GCTGGNCGGGCGCGGTGGCTCACACCTGTAATCCCAGCACTTTGGGAGGCCAATGTGGGT GGATCATGAGGTNAGGAGTTCAAGACCAGCCTAGCCAAGATGGTGAAACCCCGTCTCTAG TAAAGATAAACAAAAAATTAGCTGGGC

Sequence 480

Sequence 481

CNAAANGTTGCNCTCNGNCTCGGNTTNTAAGTAAACCTAAGGTGGGA Sequence 482

CTGAGAGATCCCCTCATAATTTCCCCAAAGCGTAACCATGTGTGAATAAATTTTGAGCTA
GTAGGGTTGCAGCCACGAGTAAGTCTTCCCTTGTTATTGTGTAGCCAGAATGCCGCAAAA
CTTCCATGCCTAAGCGAACTGTTGAGAGTACGTTTCGATTTCTGACTGTTAGCCTGGA
AGTGCTTGTCCCAACCTTGTTTCTGAGCATGAACGCCCGCAAGCCAACATGTTAGTTGAA
GCATCAGGGCGATTAGCAGCATGATATCAAAACGCTCTGAGCTGCTCGTTCGGCTATGGC
GTAGGCCTAGTCCGTAGGCAGGACTTTTCAAGTCTCGGAAGGTTTCTTCAATCTGCATT
CGCTTCGAA

Sequence 483

GCGGTGCCGCCGAGGTACTCTTCAAAATTGTCAAGGTCATGAAAGACAGCAAAAAGTGA
AGAATTCTTACAAACTAGAGGAGACAAAAGATTGGAGAAGAAACAATGACTGGCNGGCAC
GGTGGCTCATGCCTGTAATCCACTTTGGGAGCACTTTGGGAGGCCGAAGAGGACAGATCA
TCTTAGGTTGGGAGTTGGAGACGAGCCTGACCAACGTGGAGAAACCCCATCCCTACTAAA
AATACAGAATTAGCTGGGTGTGGTGGTGCATGCCTATAATCCCAGCTACTTGGAAGGCCT
CGGCAGGAGAATCACTTGAACCCGGGAGGCANAAGGNTTGTGGTGAGCCAAAATTGCGCC
ATTGCACTCCAGCCTGGGCAACAAGAAGCCGAAATTTCTGTCTCAAANAATAAANAACAA
AAAAAATAAGTACCTGCCCGGACCGGCCCGCTTCTANAACTAGTGGGATCCCCCCGGGCC
TGCAGGGAATTTCGATATTCAAGCTTATCGGATTCCGTNCGACCTTCGANGGGGGGGCCC
CGGNTCCCCAAGCTTTTTGGTTC

### Sequence 484

GATGTGAACAAATGTGTCATTGCTCTCCAAGAGAAAGGATGTGGATGGCCTGGACCGCAC
AGCTGGNGCAATTCGAGGCCGGGCAGCCCGGGTCATTCACGTAGTCACCTCAGAGATGGA
CATCGAGCGGCCGCCCGGGCAGGTCACAAGCTTTATTGGGCAACAGCAACGAGCCACGCT
GGCAAACAATGAAAGTAGAGTCGCTCAGAAACACGAAAGATCATATGTGTGTCATCACAG
CATCGAGAATTTAAATCATCTGGAAGTTCCTGCTAAATTAAAGCATACTGTGCCNNAGCT
CCCCTCTAATCAAAAAACGCTTGTCCTGGNGAAAAATTTGCATGNGGGNTTACAGAGAGA
GAGATCAACCAGGTGAGGAAATCACAAGACTCTTACATGAGTTTACAGTTAACCCCCCTG
CACCAAAAAAATAAATTAGCCATAATTTGGTT

Sequence 485

Sequence 486

TGGCGGCCCCGGGCAGGTACGCGGGAGTGTGGATNGAACAGAAAATTGGAAATCATAG TCAAAGGGCTTCCCTTGGTTCGCCACTCATTTATTTGTAACTTGACTGGGGTTTTTTCT

CTTAAAAATTTCAATTCTCGTGGTAACAACCGCAGAGTAGAAGGAGAGGGTGACTTTACC GAACTGACAGCCATTGGGGAGGCAGATGCNGGTGTGGAGGTGTGGGCTGAAGGTAGNNGA CTGTTTGATTTTAAAAAGTGTGACTGTCAAGNTTGTATCTGTTTGCTTTTNTCAATGATT

AANGNGATACAAAATGGGGCTTCTNTCANTCATTTAAAAAGGAAAAACGCCGACCATCCT TTCTAAGGATTCTCTGTGGGAAAAATGGACTGTCAATTAAAATGGCGGGGTTTT Sequence 487

CCCCAGGGTTCAGTCCTCAAGGGGCCATCCTGTCCCACCATGCAGTGCCCCTAGCTTAGA GNCTCCCTCAATTCCCCCTGGCCACCACCCCCCACTCTGTGCCTGACCTTGAGGAGTCTT TGTGTGCATTGCTGTGAANTAGCTCACTTGGTGATATGTCCTATATTGGCTAAATTGA AA

CCTGGAATTGTGGGGGCAATCTATTAATAAGCTGCCTTAAAGTTCAGTAACTTACCCTTA

Sequence 488

CTTTNGCCACNTAGAGACCCAAAAAATAGCTTATTGGGGAAAAAAATTANGTTATTTAAA AATANGCCTTAAAAACCACCAAGGAAAAACCCTTACCAGGGCNTATTAAAAAATTAAACCA ATTAAAAAAATTACCAAGGGTTTAAAACTTTTTAAATGGGNGGGATNGGCCTTTAAAAAACC AAA

Sequence 489

NGCCGACCGAAACCTGGTGAAGCCCTTTGGGCGATTGGTGATCACCCCTAGATCCGTGAA AGCTGGCTGCCCCCCATCCGGGCAAGCAGGGCCAAGGTGGCATCTTNACATTCCTGGAA CCCACCCAGTAACAGCAGCAGGTATTTCTTCTGGGTAAATGAAGAGCCTTTCGAAAAAAC TTTCTTGCCCTCAAAGTATTTACCATAAATTCTCTTTAAAAGTGGACATGGTTCAAGAA

CAAGNGGCTCAAGAAGTTTNGAAAGTAAAAGNAGGTCATTTTCCTTAAGTTTCAAGCTT TTCAAGTTTTGNTATAACTTTTCAAGCCCTCTGGCCCCTTTTTCAAAAAGAATTTTCTT

G
GGAGGAGGTCCAAATTTTTTTCTTTTNGTTTNCCAATACNTTTCTTTTTT
Sequence 490

NCCGCGGTGGCCGAGGTACCTGATTTTATTTCNAGTTTTCATCCGAATCCACTGGGG AATGGGACGATTTTGCTTTTGTTTCTTGGCCAGGAATCGCTTAATCCTGAAAGTCTTG TG

AGAAGACATGGCGAGCAGCGGAGTCAAGAACACACCACGATGGCGGAGAAAGGAAGAGGA GGCCCGCGTCCTGCCCG

Sequence 491

ACTCCCGCGTGGCGCCCCCGGGCAGGTACAAAAAAATAAAAAGGAGGCTGGTGGAG
AACTGCTTGAGCCCCAGAGTTTGAGGTTACAGTGAGCTATGATCACATCACTGCATCCCA
GGCCTGGGCGATGGAGCGAAACTGTCTCTTAAAAAATGGCAGGGAGTTGGGGAGGCTGGGC
AGGTGCAGTGGCTCATGTCTGTAATNCCAATACCTCTGGGAGGCCCAGATGGAGGGATC
ACTTTGAGCCCCAGGAGTTTGAGACCNGCCCTGGGTTACACAGGGAGACCCCCGCTNAAA
ATTTTTAAAAAAANTAGTCATTNCTTAGTGGGTGCNTTCCCTGTNGTNCCCCACTTCTTT

GANGGTTTNNGGNCCAAGGATTTCTTTTNGCCCCTGGANGGACAAAGGCTTTCANTGAGC CTTTTTNATTTTTACCCCTTGGCTTTTAAACCTTGGGCCATATNAATTAGAANCCCTTN

N

Sequence 492

TCCCGCGTGGCGGCCGAGGTACATGAGAGATAATGTTATGACAAGAATAGTTTCTGCAA CATTAAGTATGGGTCAAAAAAAGAAGAAATGGGCCAGGCGCGGTGGCTCATCCCTTTGGG AGGCTGAGGCAGGTGTATCACAAGGTCAGGAGTTCGAGACCAGCCTGACCAATATGGTGA AAACCCATCTCTACTAAAAAAAACCAAAACTTAGCCAGGCATGGTGGTGCACGCCTGTA ATCCCAGATACTCAGGAGGCTGAGGCAGGAGAATCGCTTGAACCCGGGAGGTGGAGGTTG

Sequence 493

CCCGCGGTGGCGCCCCCGGCAGGTACGCGGGGGTGGCGGCGTTGGGTTGAGCGGGCT TTTTGGAAGTTTGTGGCGGAGTTCTGTGATATGAGCAACAATGGACCAGAAGATTTTATC TCTAGCAGCAGAAAAAACAGCAGACAAACTGCAAGAATTTCTTGGGCAGGGCCTGGGGAA TGCTTTTTTATCTCATATTAGTGCCTGTGATGGCATCTTTCATCTAACACGTGCTTTTG

AGATGATGATATCACGCACGTTGAAGGAAGTGTAGATCCTATTCGAGATATAGAAATAAT ACATGAAGAGCTTCAGCTTAAAGATGAGGAAATGATTGGGCCCATTATAGATAANCTAGA AAAGGTGNCTGTGAGAGGAGGAGATAAAAAACTAA

Sequence 494

CGCGGTGGCGGCCGAGGTACTCATGGTTGCTGTAAATTAAGGCAGCCGTTCTGCAGGGTT TTGCTTAGCCAGGCTCCTCTGAGATCTGGCTATTCTGTCTTGTGGATTTTCAGTCCCC GC

**GTACCTGCCCGGGCGGTTCG** 

Sequence 495

AGATCTCAAGATCTGGACTTCTGTTGAAAAATTTTCCCGTGAGGNTNACTTATGTCTG
TA

Sequence 496

CGCGGTGGCGGCCGGCCGGCAGGTACCGTGAAAAGGGCACTTCTCCTTGAGAAGGCCT GACAGTGTCGTTAATGTCCTGCTGGCGCATGGTGAAAATTTCAGGGCAACAGTAAAGCAC CCTCTTTAATTTCCCTTCTCCAAGCCCAAGCTTTTGCAGGTAACTGGAGCGCTTCCTC AT

TTGCATAATAGGCAGTTTCAATAACTGGGGAC

Sequence 497

CCGCGGGTGGGCCGGCCGAGGGTACNNNGGAGGCCTCATAANGGCNGGGNATCNTCGAG
GNTGGTATNGNACTGNTNANAAAGCCNNCATGGTGGTANCNCACCAAAANCTCACAAGAA
CAATTGNNGCNGCGAAACAGGCAACAGANTCTGNCATTATATAATAAGGGCGTGGTACGG
TTGGGGAACCCCGNANGANTCNNTATGGTCCTTGNTTNGCAAGCNNTGCATTTTAAATCA
GACGACCGTNAATTTGTTANCCCCAANCCTTNTTANAATAAATCGGCAATCGCGCAATAT
CTCATCATTNANCNACTGTGGACGACTTGACAATCTTAGGGCTTNATGGACTTATTGCA
AAACTCGAGAAAGAACAAACCTAGGGGTGCGCCCTGACCTTCGGAATAATTCGTAAGCTA
TATGTGAGAAACTAGCAACAGGGCGTTTCATTTATGNGNAANGGGACGCGAANTGGANGA
TAATTATGTAANAAGNGGGCCCCTACGANTTTGGCCCCTAGACGCCCAGGGAAACCGCGG
GGCNCCATGCATNACNCANACTTANGGNAGGGGTANTTCTCCNCACACNCNTCNTTTTCG
ATTTGGANAATANGCTGGGAATNAATCCTACATGACCTGTCATTTTCGGAGTTATCGCNG
GCCGGTACNGNNCCCCCCCGGGGGGGGGGGGGGGCCCCCCCGGGNTTANCCCCCCAAGCT
TTTTTTTGGTTTCCCCCTTTTTNAGGTTGGAAGGGGGGGTTTNAAATTTTGNCCGGCC
GC

CTTTTGGGGCCCGGTTAAAAT

Sequence 498

TGAGCTCCCGCGGTGGCGGCCGCCCGGGCAGGTACACGGGCCTTCCACTTCAGCTGACT GAATTTAGGCAGTTCTGGCCACTTCAGTTTCCGCACCCAGGCCTCCTGACCCATGGTATC TACGATGAGATCC

Sequence 499

GCAACATTTATCTACAAACCTCTTGGATATTACACCGTAGGNAAGCTTTCTGGGTTATT

CCACCTAGTGAAACCTTGCTCAAGTTTGAAGGGGGTANTGTTGGGATNCTTTCATCTT

TAATTAAAATTATTTACCAACCATGTTGAAAAAAGCCCCGACCAATGGTCAAGGGACTGNG CAAAGGAGGTGCCCACCAATGTTGAATGGGGGNTGGTGGGAAATGGGCAANGCTTCACTG NTANACAAGGGTGGCTTGGGGGGACCTCAAGTTTTGGGGGTTCTTTGGGAGNAAAGCCAC TTTAGNTTTATTAGCCAAGGAANTGTTCTTCATAAAAATTGGGTNTTCTTGGATTTAGG

AGACCAANGAAGTTAGGTTNGGGGGGAAAT

Sequence 500

CGAGCCGGGAGCCATTNANAGTTGTTAAAAGCCTNGGGGGTGCCCTAAATGAGTGAGCCT
AACCTCACATTTAATTTGCCGTTTGCGCCTCAACTTGCGCCCGCTTTTCCAGNTCGGGA
AAAACCTTGTCCNTTGCNCAGCTTGCATTAAATGGAATCGGNCCCAACNGCCGCCGGGG
GAGGAGNGCTGGATTTTGCCGTTATTTGGGGCGGCTTNTTTCCCGGCTNTCCTTCCGCTT
CAACTTGNACTT

Sequence 501

ACATACTAGCNNGGGTAGCATAAAAGNTGTTAAAGCCTGGGGGTGCCTAATGAGTGGAGC TTAAACTTCACAATTAAATTGCCGNTTGCTGCTCCACCTGCACCTGCTTTNCCAAGAT CT

GGGGANAACACNTGNCGTGCCCAGGCCTGNNATTAAATGCAATTCNANNNCAACCGCCGC NGGTGGGAGNAGGGACGGTNATTGCCGTTAATATGGGGGCCGCTACTTTTTCCCGC Sequence 502

NACAAACATTACGAGCCGGGTAGTCATAANAGCTGTAAAGCCTGGGGGTGCCNTAATGAG Sequence 503

Sequence 504

ACATACTTANCCCGGNAGCATTAAAGTGTAAAGCTCTGGGNNTGCCTAATGAGGTGAGCT AACTCACATTAATTTGCGTTGCTGCTCACTGCCCCGCTTTCCAGTCGGGAAAACNCTTGG TCNGTGCCCANGCATGCATNTAAATGNANATCGGCCCAA

Sequence 505

CACAACATACGAGCCCGGGAGCATAAAGTGTATAAGCNCTGGGGTGCCTAAN
Sequence 506

CGGTGGCGCCCCGGGCAGGTACTCGTCTTGGTGAGAGCGTGAGCTGCTGAGATTTGG
GAGTCTGCGCTAGGCCCGCTTGGAGTTCTGAGCCGATGGAAGAGTTCACTCATGTTTGCA
CCCGCGGTTGATGCGTGCTTTTCGCAAGAACAAGACTTTCGGCTATGGAAGTCCCCATGT
TGATGGATCCTGAGGCTTGAAAAAAAAACTGAAAGAGAATAAAATATCTTTAGAGTTCGGA
ATTATTGAGAAAAAATCAAANACTCCCNAGTTTTGATGACCTGNGAAGGAATATTTCNGAG
GGACNCCANGCCCTTTGGGGNAAGGANTCCTTGACTCTTTTCAAAGGGAATGNAAA

**GGGAAAATTTCC** 

Sequence 507

CTAGTATNAAACATTTCAGATACTTGCACTGATTTTCTGGTGGANTAAAAGCAANGGCTT NTACAAGTTNTAAGCATGTCTTNTANGNCTATGCTTTGGAATACCAGCTAATAACCAAT

AACAAGNCCAGNAGCCTTAANGTGGTATTTTTTTGGTTGACCCTAAAAAAACATGGAACCT NAANGGGTTTCTNCAAAAANTTGCCTTAACCAAATGGAAANTAGGTGGGGGGAAG Sequence 508

TATCCGCTTCACAATTCCACACAACNATACGAAGCNCNGTTAGCATTAAAGTGTAANAGC CCTGGGGTTGCCCTAATGAGTTGAGGCTAACCTCACATTAATTTGCNTTTGCCGCTTNAC NTGGCCCCGCATTTCCAGTTCGGGGGAAAACCNTGATCGTTGGCNCAGGCNTGCCATTT ANATNGGAATTCGNGCCCAACCNCNCCGGTTGTAGGAGGGNCGGGTTTTGCGGNAATTTG GGNGCGCTTCTTTCCCGCTT

Sequence 509

CCNANGTACACTCCCACCACCACCACCACTGGTCTCTTTCATATNNCTCAANNNTCAACNTG
NTCCTGNGGCTTCATAATTNTCCTNTTNCATCTTTTTCACTTCNNANGCAAACACCGC
CT

CNNCTNANGCTNTNNANTCAATNCANTTNNCCTTAATNNAAATCACAAANTNTCCTCC AT

TACNCANNAANNTNTNNNCATTCANNNCCACAATCCNGGTNNTGGTCTNNCTNNNCCACA
TCANCAAAAATCACATCCACCATTNCNATCCCNCNTACCTTCCCNNNCCNCCCCTCTAAA
ACTANTNNATCCCCCNNNCTNCAANAATTCNATATCAANCTTATCNATACCCTCNACC
TC

NAANNNNNCCCNTACCCAACTTTTNTTCCCTT

Sequence 510

Sequence 511

Sequence 512

AGCANCACCGCGGNGGCGTTTGCGGGAGAAACNGNGGACCCCCCGGGCTGCAGGAANNCG

# **ANANNCNATTTAGGGNGACNNAAACCCC**

Sequence 513

Sequence 514

ATTGGAGCTCCCGCGGTGGCGGCCGCCCGGGCAGGTACCTCCGAAATCTTACCTTCAGT CTTCTCTGCCACCCAGTCATTTATATGCTTCCTGCACTCTTCAGTGTCTTCAGCAAAG GA

TTCGCCCACCGGAATGATCACCAAGACACACAAAGTAGACCTTGGGCTCCCAGAGAAGAA AAAGAAGAAGAAAGTGGTCAAAGAACCAGAGACTCGATACTCAGTTTTAAACAATGATGA TTACTTTGCTGATGTTTCTCCTTTAAGAGCTACATCCCCCTCTAAGAGTGTGGCCCAT GG

Sequence 516

ATTGGAGCTCCCGCGGTGGCGTTTTGCTCTTGTAGCCCAGGCTGGAGTGCAATGGCAGG
ATCTCAGATCACTGCAACCTCTGCCTCCTGGGTTCAAGCGATTTTCCTGCTTCATCTT

CAGGTAGCTGGGATTACAGGCATGTGCCACAACGCCTGGCTAATTTTGTATTTTTAGTAG
AGACTGGTTTCTCCATGTTGGTCAGGCTGGTCTCAAACTCCCGACCTCAGGTGATCCGCC
CGCCTCGGCCTCCTAAAGTGCTGGGATTACAGGCGTGAGCCACTGCGCCCAGCTATACTG
TATATTTTAAGGAAGTTCCAGCATGTTGCATCTTCTGCATTTATCCCTATATCATTAAAA
GAACATAAAGTTATCATGGTGTTGGGTAAATTAGCGAAATTCAACCCCTTCCTAAGGTTT
AAGGGGAAAAGGTATTTTTAAAAAAACAACTTAATNAAAACTTTACCCTTCTTATACAAGA
GTGGATTTCCCCCTTAATTAGGGATGCATGGTTGATTAAACCTCNAGATACAGCTTTT
TT

GCAGTAATGGGGGGGNTGGGT

Sequence 517

GCGATTGGAGCTCCCGCGGTGGCGGCCGAGGTACGCGGGTGTTGATCCAGTTCTTGCTT
TTCAACGAGAAGGATTTGGACGTCAGAGTATGTCAGAAAAACGCACAAAGCAATTTTCAG
ATGCCAGTCAATTGGATTTCGTTAAAACACCGAAAATCAAAAAGCATGGATTTAGTAGCT
GACGAGACTAAACTCAATACAGTGGATGACTAGAAAGCAGGTTCTCCCAGCAGAGATGTG
GGTCCTTCCCTGGGTCTGAAGAAGTCAAGCTCATTGGAGAGTCTGCAGACCGCAGTTGCC
GAGGTGACTTTGAATGGGGATATTCCTTTCCATCGTCCA

Sequence 518

Sequence 519

Sequence 520

GGAGCTCCCGCGGTGGCGGCCGCCCGGGCAGGTACTATGTTGAATAAATGTTTTTTCCCTTTTTAATTTTTCTGCTTCCCTAGTGCATAGAATTGAACTGCTTAGGGAGTTTGAGGCT

Sequence 521

Sequence 522

AGGTACACCTCCCAAGCTCTCTTCCTCCGGCTCTAGCTATATAAGACGTGCCTGCTTCC CCTTCGCCTTCCACCAAGACTGTAAGTTTCCTGAGGCCTCCCCAGCTTCCTGCATGCTTC CTGTGCAGCCTGCAGAACTGTAAGTCAATTAAACCTCTTTTCTTTATAAATTACCCAGT

TCAGGTAGTTCTTCACAGCAATGTGAGAACAGACTAACAACAATCAACTCATGGCTTTAA CACAAAAAAAATAGGTAAGTTCAAAATTAACATATTACCACATCCAACTTCTTTATTCTT GAGAAAACAAAAAAGTCCAAAATCAAAGGAAAGCACCCGTTTTAAACCCTCATATCTTTC TCAGGGCTCACTGCAGTCTGGCCATATCTCAAGCAGGTC

Sequence 523

GCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACGCGGGGCTCTTGAGGAGTGAGACTG
CAGGAGATGTGGGCCGTGCCAAAGAGATGATGAGACTGTTGCTGAGTTCATCAAGAGGA
CCATCTTGAAAATCCCCATGAATGAACTGACAACAATCCTGAAGGCCTGGGATTTTTTGT
CTGAAAATCAACTGCAGACTGTAAATTTCCGACAGAGAAAGGAATCTGTAGTTCAGCACT
TGATCCATCTGTGTGAGGAAAAGCGTGCAAGTATCAGTGATGCTGCCCTGTTAGACATCA
TTTGTAAGTGCTGGAGTGCAGTAACGCCATCTCAGCTCACCGCGACCTCTGCCTCCTGGA

TTCAAGTGATTCTCCAACCTCAGCCTCCCGAGTAGCTGGGACTATAGCAGTGCACCACCC
ATATATGCAATTTC

Α

Sequence 525

Sequence 526

AACTTAATGTCTTCCTTTTTTTTTTCACTGGCTTTTTCATANATCGAGACATGTAAGCA
GCATCATGGAGGTAAGTTTTTGACCTTGAGAAAATGTTTTTGTTTCACTGNCCTGAGGAC
TATTTATAGACAGCTCTAACATGATAACCCTCACTATGTGGAGAACATTGACAGAGTAAC
ATTTTTTNGGGGNAAGAAGAATCCTACAGGGTCATGNTCCCTTCTCCTGTGGAGTGGGG
GGNAGAAGGGGTATGGCCCCAGGGNNGGCCATATTACTGACCCTCTACAGAGAGGGCAAA
GGAACTGCCAGTATGGNATTGCAGGATAAAGGCAG

Sequence 527

AGGTACTCACAGTCACGCTCCTCTGAACCATCCTTGGGCTTCATGGGGTTGGCATTGAGG
ATCCCTACGACAGTCCCCTGCTCCGTCTTCCAGAGCGCTTTGTGAACTTCTCCAAATAAG
AACAAGGACACACATTGTGTCAGGTCACGAAGATCATTCAGTTTCCATATGCTGAAGGTT
TTCCACTATTCACACTCTGTGGCGTAACCTTCTTGAATATAACCCCAAATGTCACCCA

TCTATTTCTTCCAGCTTCTCTCTGGCCATCTTTTCCTTGATCTGAGACAGTCTGATCAG

. ПТ

Sequence 528

CCGCGGTGGCGGCCGAGGTACATTGTATACTGCAGTGTCGTCTACATGGCATTGGACAGG ACATAATGTAAAACATAAAAGTGCAATTGTTACACTTACATATGATAGTGGAATGGCAAC CGTGACCAATTTTTGGCTCAAGTTAAAATACCAAAAAC

Sequence 530

Sequence 531

Sequence 532

TTTTTTATTCAATTTGCGATNGACAGNNNTAGNTTNAAATGTTNGTAACACTCTTAGAN

N
NNCTGGTTTGTTCATTTGACATNGGGGCTGCACCAATTTTTATTACAAAAATCAAAAAA
G
TAAAAATTCTTACAATATTTGCAGAGTATAACCACTAGTTGCCTAGACAAAAGCTAATT
T
CTACAAAATCAAAAACTTAATGCAGTTTTATTAAGAGAGTCAAAATTCTCTCAGTTAAC
T
GGATATACATAGTGGTATATATCTTAAAGCAGAAAACCCCAAAAAAACAAAAACAAGGAAA
AAAGAAAATACATGTCAACAGTCAGGTAAATATTTTGACCTGACAGGTTCTACAAATAGG
GGATTTTCACTACATATAAAGGAATCTGTTACATGGGGGTAAAACTTCCAGAGACCAAGT
AGGAAGNGGTGGAATAAAAAAACCAATAAATNCAAACGCCACCCCAGGCTGG
Sequence 533

CCAGCTGCTNGCCTGCAAAGANGAGCCTCCTNNGGGGGGGGGNAAAACCCCNCCCNANCC NGGANCTTGGCCTTCACANTNNCGATGGGGGGCACTGGGCGCCACCTCANGGGAGAAGGG CTTGCCGGGAAGGGNTNNCACGAAGAACTGCATTNNGACCTGGNAGCGGAAACCAGGATC CTGCCAATNTNTNNACCACGGGGCACCCACAGGGACACAAACAAGCNCACCCAACAAAGC CAACCGCCCCNNCCCGNGGACCNGCCCG

Sequence 534

CCCGCGGTGGCTCTTGGGGCTAACCTCTCTGCAGATGAAAAAGCAGCTGAAAGGAGTTTT TGGCGNCACCAATAACCCTAAAACTGAAGCCTGATTACTGGAGTGACAAACTACNTGAAA GAAGCAGAAGCCGTTTGCTTATTATCGCCGGACACACACTGCCAATGAGCGGCGGCGGCG TGGTGAAATGAGGGATCTCTTTGAGAAATTAAAGATCACNTTTGGGATTACNTCATTC

Sequence 535

NGGGCAAAGGAAGNAACAGACACACNCTNNTGGGGGNGGATNAAACCCGGGACCAGAGG
CTCAGNGGNGGGAGAGANCCCTGCTTACCCACCAACCAGAACGNGGCCCGCCNAGAGGCT
GGAACNGAGAGAAAGAANCNGGGGCTGGCNNAAGAAAANANAGACANNCNCACAAAAGCC
NAGTNCATNTTTNNTTNCCGNNGGGACCGNNCACCCGCAGAAANANNNCACAANAGGCCG
CCGGNCAAACGGGGGGGAGCACGGACNGTCAGGNCNCNGGGAAGGGGGCAGCCCAACCCG
CAGGGCNNCNCCCCCCCNGGCCNNNGGAGAACCAGGGCCCNNCNCAGGGGCCCNAGGGAC
CGCCAGGCNGGNNCAGCCAGGAAGGCCAAAANCAAGAGGGAGAAAGGNGNAAAA

Sequence 536

GGGGANCCCGCGGNGGCANATTGGGGGGGAACACACAGCAAAGANACGNNACAGCCTGAG AGCTTTCCTTGGGGGGGCTTAAAACCCCCCGNCCGNCCATCTATCCATCCATCTGCTCAT CCNTNCCTCCATCTGCGCAACAAACGCNAGAGAANCAATCCTTGGGGCAGATACTGGGGC TGCCCTCAAGGAGCTNNNATAGAGGNCAGGGGACCTTTGNCGCTNTTTNNCTAGGGGANC Sequence 537

GGNCCCCCGGGCTGCAGGAANNCGANATNTNCTTTAGGGNGACCAAAACCCCC Sequence 538

Sequence 539

ATTGATTTTTTTCTTGGTTTCTGGATAAACCACCCTCTGGGGACAGGATAATAAAACA

GTAATATTTTTAAGAAGGAAAAAAAAAAAAAAAAAAA

Sequence 540

TTTTGGTGGCTGACTGATCAGCGTGGTGGTTGCTGAAGGTTGGAGTGGTTGTGGCAA
TTTCTTAAAATAAGACAACAGGCTGGGTATATTGCCTCATACCTGTAAATCCCAGCACTT
TGGGAGGCTGAGGTGGGAGAATCTTTTGAGGCCAGGAGTTTAAGACCGGCCTGGGCAACA
TGGTGAGACCGTGTGTCTGCAGAAAAATGAAAAGAAATTGGCTGAGTGTGGGGGTGCATG
CCTATACTACCATCTACTAGGGAGGGTAGGATGGAAGGGTTGCTTGAGCCCAGGAATTCA
AGGNTGGGCCACTGCACTCCACCCTGGATGGCAGAGTGAGATCCTGCCCTCAAATTTTAA
ATNA

Sequence 541

GCTCCAATCTGCGAAATACGGCACTCTCTTTATTGACTACTGCTTCTCTCGGCCCCGCGCCGCCCCGCGCCCCCGGGAAATACGGCCCCGGGCGCCGCT

Sequence 542

Sequence 543

GCCGCCGGGCNGGNACAAATGTTAAAGACGTTGTTTGTATNTGTAAGGCTGGTGTATT CAGAGAGCATNATCTCTTATTCCTCACTTTCCACCCCGGTATTTTGTAATGACCATGAT

AATGTTTNTACTTTTTGTNTAATGGGGTGGGGTGGAGTGGGGGCTATCTGAGAGTCANCC TGAGGTCTTTAGAGGACCANCTATTGTATCACCTTGGATACTTGAAGTTT

CAAANACTTTGGCCANANTAAAATNGNTGGAACTANAGGTTTCTTTTAAAAAAAAGGAAG GGTTAAAGAAGCCAAACGGTNGCTTTTNGGGGGAANGCCANGAAAGAAAANAAGGGGGG GNAAAAAAGGCCATGNCCATTCNTNTGCCCCTTGGNAATGGAAGCCCCANGGGGGGGNAC ACCAAGCNAAANNAAGAAAAGGCCCCACCTTNATTCTTCAATTTTTAAAATTCCTTTTA

A CCAGAACATTCTTCTTTTGGCAACAAGNGGTCTTCCCCTTNGGGATTGGTCGGAAANAAA TCACCCATTGGAAGANTGAGAGAGTNCACTGGGAAAAGCGGCCCACCTTATTCAGTCCCC TCCCCTTTCTTGGCGTNTGGCAACCAAAAGNTTNTTCCTGGCGGGGCGTTGGGGACCCCG TNTTTCAAACCAAGTAAGGAAGGGGCCTTTTAATTTTTTGGGGACCTTTATTAATGGCTT N

AGAAAAANGCAATNGGTAAGNGGCCTTTCNTTGNGGGNGAATNAAGGGGCCCCACGGAAA AGCTTTTTCCCCTTGGAATTGTACCCCGGCCGGNACCTTTTTCCNAANGCCCCCCTTNNC CCTTTANAAGGACCCCCCAAAGGTTGGNTNGGGCCCCCCC

Sequence 544

TCCGCGGTGGCGGCCGAGGTACCAATACTTACTTACAAATTTAATACTGCTTCAAGGTAT
TTAATCTAAAATTTTACCAACTTTGATTTGTCTGGTTAGGATATTTTGTTTTAGTGGATA
TGCTTTAATTCGGATCAATTACTGCAGTAAATCTCATCCCTAAGCATGAAATGTTGTCA

CAAATACCCAGTTCCATTTAGTTATCAATTAGCCCAAATAAGAGATACAAAGTATAACAG TGACCAACCTTGTACCTGCCCGGGCGGCCGCTCGACCACTGACATAGACTGAAAGCAAGA AGAGTGCTGTGTTTGTTGCTATATCCCCTCCAACACCTAAGGCAATGCATTTCACATC

GCTGAGAGCAGATAACCTCAATACCTGGGAACTAGAAAAT

Sequence 545

AGTGAGGGGTTAATTGCCGCCGCCTTGGGCGTAATTCATGGTCATAAGCNTGTTTCCTGT GTGAAATTTGTTATCCGCTTCACAAATTCCACACAACATTACNGAAGCCCGGGAAGCCAT AAAAAGTTGTNAAAAAGCCCTGGGGGGGGGCCCCTAAATGGAGGTGGAGGCTTAAACCTT CAACCATTTT

Sequence 546

GCCGGGCAGGTACCTGATGCAGGGAATTGAAGCCAGACCCAAAACGGGCAACCCAATAGG ATGGCCATCTGCCCCATTAATGCCAGCTTGTCCAAGTGTAATTATTAACAGTGCCCCCTT TCACTCTCCAAAGAGTNCCTTGTNCAAACAGNTTAATTGTGGAAGTCGCCTTCAAGATGA CTGGGCGGGTAAAGGAAAGTGGGAGTGAGGGAAGCAGGGTAGGTGGAGGGTGAAAGGG AGAGGCCTCATCTCAGGGTGGCTTGGACCTGCACCAGCATCGGCCTGCATGAAATGTGC TCCTACTCTTGCCCAGGCTGAGTATCAAAGAGAAGCAAGAAATCTAGATAAAAATNCAAA TCCAGAAACA

Sequence 547

Sequence 548

GGCGCCGGCAGGTCCCTTTGTAATATCCTTTATAATAAACCAGTAAATGCTGTTTCCCT GAGTTCTGTGACCTGCTCTGGCAAATTAATCAAACCCAAGAAGGGGGTTGTGGGAACCCC AATTTATAGCTATTCAGTCAGAAAAAAACAAGGTAAGACAATCTTGGGGCTTGCGACTGG CATTGGAAGTGGGGGACAGTTGTGCGGGGGCTCAGCCTTCAACCTGTGGGATCTGACGCTA TCTCTGGGTAGATGAAGTAGAATTGAACTGGGGGACACCCAGCTTGGTGTCCACTGCAGA ATGAATTGCTTGCTTGATGTCTAGGGAGGCCGCAGAATTATAGCAGGGAGGTGAAAAGCA CTTCTTATATAGCAGTGGCAAGAGAAAATGAGAAGAGAGAAAAGCTGAAACTCCTGATAA ACCAATCAAGATCTCATGAGGCTCATTAACTATAACAAGAATAGCATGGGAAAGACTGG

Sequence 549

NACCCTCTCAGCCNCCCTGTAATTGCGCNAACTNTGGAAACGCTGCAACGATTGTCGAGT CGTATAGCGTCTATGTACATATAGCATNTTCNATAGTCATTGGTGTAGAGATAGAAAATG CTTCGTACATGTCAATGGGAGAATGGGTGGTACCACTACACCGGAACTATCCCTAAGTCC ATCCGCCTGGGGCGAAAGGAAGGAAAAAAAGA

Sequence 550

NTATCTTGTTGCCTCATGNGGGCTACACCNACGCTAGNNAGCCCAATGAGACGTTACGAG
CGCGCAAGTNAGAAACNAGATTTCATAGAGCGCTTGTTGGGAGAGGGACATTCGCAAACC
GCGCGTTTAAGTTACTCGTAGATATTGAGTANNTAAGGNCGTTGGGGAAACGCAACCAAA
TACTCCTAGAGCCTTTGCCGNAACAAGNTACTACANTTGTTCNGGGGGAACGAAGGTGCC
CCGGNTCAACCCNTTGGCCCCCAAANAGCCCCAAGNCTTCCNTTGTTNGGGTATGGCAAA
NNNCTTAACNGAACCACATTGGGCCAANGGNNCGCNANTGGNCCCCNTGGTTTTTATCNN
NCANTAACCCNANCNAAATGGGCGNCNTCCATAGGNAAACCTTGTTCCCNTAGCCCCTTT
NGATATTTCCTCGGCATTTTNTGGCCCCNTTTTCGCTTTNTNTAANCGCCANTTACCT
NT

AGCNCCCTTTTAGGCAACATCCTTTAAAAACGGNGCGGAGCGGTGTCCCCCCAAGGGCCT
TNCCCCCCAAANGCCCCTTTTGGTGTCGAATTTGGCAAGCCCTTTTTGGNAGGGAACNA
AAAGGGGGGGGTTGGGGANAACTCCGGCCCCNACCGCCCCTTTGGNCCCTTGGGTAAAAC
TCCAAATNGGGGGGANGGCAACNAAAGGCCCCCTTCNTTGTNGNGNCANTNTTTGGGNA
AAGAAGNACCCCAAGGNAAGTGNNCCCACCGGGGGGTTNANAAANAAAACCCCCCAAAGC
CACCCAAGNGGAACTTACCCCTTANAAACTTTTTGGNATTANGTTNTAACNAAANNNACC
CGNCCAAAATTTAAANAAAAANANAAGGGCGGATTTAATTTTTTAAAATTCCNTTGNCCCA
TTNGGGGGTGGAAACATNTAAAACAAATNTTAAAA

Sequence 551

AGTGGACTNTGTGACCTTGAAAAAGTCATTTAACATCTCTGAACCCTACTTTCTAAGTC

CTACAAGTAATATAGTGGGTGAGGTGTTCTTTCTTTGTTCTGNTACTNGGATGTGA

CTCTCCNTTTGGAGATGAAACCATGGCGTAAGTAATATAAAGACTTTTCCCTGTAGTT

Sequence 552

CCTTTAAATGNTTATCAAAAGAGTTTTCTAACCAAGGNGTAATACCCTTANTTCTTAAC

TTTNTTTTCTTTATGTGNTAGTTGTTTTCATGCTACCTTGTGTAGGGGAAAACCTTTAT TTACAAGACNCATATTTANAAAAGGGCTANATTTTTAAAATACTCAANATTAATATTAAA AAGGTTGGCTCCTNGAATTANNAGCCAAGNAAAATTANTATTTTACCAGTTTTTCAATT

CCCAACNANGAAAATAGGCCATTTCCCATAAACCCCAACCTCCCNANAAATGNAACCCCA AAGGGGCCAATTATTTATTACGTTATTTTTTGGGGAAGGGGGAAANTCCAANNGGGGGGT

Sequence 553

CGGGTGGCGGCCGAGGTACCCATCTCTGCCCATCACCGCTGGAATTTTGATGACCTATTG GAAAAGATCTGGGACTATCTGAAACTAGTGAGAATTTACACCAAACCCAAAGGCCAGTTA

# Sequence 555

CT

GGGTGGCGCCCGGGCAGGTACAAGACCATGACACCGCCCAAAACACTTCCTGCAGA
TGTTGTCGTTGGAAAACTGTCGTCTTACAGAAGCCAGTTGCAAGGACCTTGCTGCTGTCT
TGGTTGTCAGCAAGAAGCTGACACCACCTGTGCTTGGCCAAGAACCCCCATTGGGGGATAC
AGGGGTGAAGTTTCTGTGTGAGGGCTTGAGTTACCCTGATTGTAAACTGCAGACCTTGGT
GTTACAGCAATGCAGCATAACCAAGCTTGGCTGTAGATATCTCTCAGAGGCGCTCCAAGA
AGCCTGCAGCCTCACAAACCTGGACTTGAGTATCAACCAGATAGCTCGTGGGATTGGTGG
GATTCTCTGTCAGGGCATTAGAGAATCCAAACTGTAACCTAAAACACCTACGGTTGAAGA
CCTATGAAACTAATTTTGGAAATCAAGAAACTTTTTTGANNGNAAGTGAAAGGAAAA
Sequence 556

GAGAGCCCGGGTGCCGAGGTACGCGGGGGGGGGGGGGGCACTCGCAGCTGCAGCAAA TCTCAAAATAAAGAGGCAACGGCCTTTCTCTCTCTCTCCATCTCTATAGCACACCCTT

TATTTCTTTTCTTTTTTTAAGCCTCACGAAAGATTTTACTTGTAGATCAACTTTCAA
AATGTAGGAAGTCAGAATGGGTGACATCATCAGAAAAATATGTGGAGCTGATCACAAGAA
GTGAAGAACCCAGAGCACNGAAAGCGGTTGTGACTCCTGGGCCCAGGGAGTTGACAGCGT
CTGGGCTTCAGAGGAGCCAGCCGCCTCCGAGTTGTCTTGGAAGTGAGGCTCTGCTGTAGT
CCTGTTCTTCTGGCTCTAAGATCTGAATGTTGTGACCACTAATTTGCTNTTTCCTGGA
GG

GTAACCCCAGTTTGGTCCACAAGGGCTT

Sequence 557

GAGCCCGCGGTGGCGGCCGAGGTACTGGATGTCAGGTCTGCGAAACTTCTTAGATTTTGA
CCTCAGTCCATAAACCACACTATCACCTCGGCCATCATATGTGTCTACTGTGGGGACAAC
TGGAGTGAAAACTTCGGTTGCTGGCAGGTCCGTGGGAAAATCAGTGACCAGTTCATCAGA
TTCATCAGAATGGTGAGACTCATCAGACTGGTGAGAATCATCAGTGTCATCTACATTCGA
GCGGCCGCCCGGGCAGGTACCGCGGGGGGAGCGGGCCCTACCGTGTGCGCAGAAAGAGAG
GGCGCTTGCCTTCAGCTTGTGGGAAATCCCGAAGATGGCCAAAGACAACTCAACTGGTTC
GTTGCTTTCCAGGGCCTGCTGATTTTTGGAAATGTGATTATT
Sequence 558

T
CTCCCTCTGTTGCCCAGTCTGGAGTGCACGTGGCATGATCTTGGCTCACTGCAACCTCCA
TCTCCTGGGCTCAAGCGATTCTCCTGACTCAGCCTCCCAAGTAGCCTGGGATTACAGGNT
GCCTGCCACCATGTCCCGGCTAATTTTTGTATTTTTAGTNAAANACGGGGTTTCACCA
TA

Sequence 559

CGGGTGGCGCCCGGGCAGGTACGCGGGGGGTGCCTGGCTCCGTTTCCTGCTTTTGGTT
CTTACAGTAGTCGGCGTAGGCCTTAGGTGGGTTCGTGCGCCTTCTACCTCGCTGTTTCGG
TTTTCCTGGCTCCTCGGCCCTTTTCTCCCCTGTTGCAGCTGGAGCGGACGAAGCCGCGA
AGCTGGGATTTTTACTGTCTCCTGAAGAATTTAACACAAACATGGATATCAGACCAAAT
CATACAATTTATATCAACAATATGAATGACAAAATTAAAAAGGAAGAATTGAAGAGATCC
CTATATGCCCTGTTTTCTCAGTTTGGTCATGTGGTGACAATTGTGGCTTTA

AA

Sequence 560

Α

GCGACGCTCATACANGGCNTAGCCCCGGGAGGAACCCGGGGCCGCAAGTGCGTTCGAAGT GTCNATGATCAATGTGTCCTGCAAT

Sequence 561

CATGTGGGAAGCGCTGTGAAGAGTTGTTGCCTTNCAAGATATACTCCAAATTCCCAGTTC CAGCCCGTGTCATTAAAACTCCGCTGGCGTGAAAGATGACATCCTTAGCCCAGCAGCTGC AACGACTCCGCCCTCCCTNAAAAGGGGGGATNCCAGCCTTTTAATNTANAGATGAANTTTG CCTTCCTTTGNTATTTT

Sequence 562

Sequence 563

Sequence 564

Sequence 565

Sequence 566

100

# Table 1

GTGAGGCAGAGGAAGCTGGAGCGAGGGTGCAACAAAACGTTCCAAGTGGGACAGATACT GGAGATCCTCAAAGTAAGCCCCTCGGTGACTGGGCTGCTGGCACCATGGACCCAGAGAGC AGTATCTTTATTGAGGATGCCATTAAGTATTTCAAGGAAAAAGTGAGCACACAGAATCTG CTACTCCTGCTGAC

Т

Sequence 567

GCGGNGGCGGTTTTCGGNCGAGCCCTCTCTTGNCCATCTTCTCCCGCTGCTGAAATTTCT
NTTGCGGGCGCTGNAANCCCAGGACCCCNCCCCCGCGTACGCTGGATAGCCTCNTGGCC
AGAAAGAGAGAGTAGCCGCCGAGCACAGCTAAGGCCACGGAGCGAGACATCTCGGCCCGA
ATGCTGGCAGCTTCAGGAATCCCCGCGNACCTGCCCNNTGCGGTCTGTTCGN
Sequence 569

ACAAAAACCCAAACCCCAGACAGCAGNAATGNCAGAAGANCCANGGAGAACAGCAGAANC
TNACACCGCNGCNCTCTGAAGGCTGAGAACACAAGNCAAANACATNNAACTNAAAAACAA
CCGCTGAGAGAACACGGGGAAAAATNTNCANTTTAGAGANGNCCACAAAAAAGGACACGC
AAAGGGGAAGGCCAGGGGGAGACAACGACGNNANNCNNGGGAAGACNGGGGAGGGG
NGGAGAAGACCNNGGNNGCCAGAANNCCGGNCGGAGGNCACGAGGCGGNGACCCACAAG
GGACCNGCCCGGGCGGNCGGNCNAGAACNAGGGGAACCCC

Sequence 570

Sequence 571

CGGTGGCGTTTAGGGACCAAACGATAGCNGTTCTGTTTAAGTAGGGACCTCTCATGGTNT NCAGGCTNTGACAACCGAGAATCAAACTGGAGAACATTCCGAAGCCGTTCTTATAAGNGT CTCCATCTCTACCTGGGCTGAAATGGAATGTGCCAAATGTAGCCCAGCCTGGTCCTTGGGT GTTGCCAGTTGATTGATGACTGGGAGCCAAAGTGGCATTTNCTTNGACCTAAACGGGCGA TGATGAAATAAATCGAGCGGCCGCCCGGGCAGGNACATCTGTGAATGTGAATGCCAAAGC GAAGGCATCCCTGAAAGTCCCAAGTGTCATGAAGGAAATGGGACATTTGAGTGTGGCGCG TGCAGGTGCAATGAAGGCCG

Т

Sequence 572

TGNAANNCCCCGCCACGGAAAAGGNGGCCCCNGAGCCAGAGCTCCAGCAGCCCNGGGAG GGCGGGCCCGAGGCANGGANAAGNGGGAAGGAAAACGAAGAACAGGAGCAGAANNGAAG AAANACAAAGNGAAANGGGGCCAGNCAGCATGTCAGAGACNGACCACAAAGCCCCCACNN CCACNGAAAAAAAAGGNGGGAAAACACCGGAANNAAAGGAAGACCCAAGCAACNNGGNNN CNGGCAANGAAAGCAGCAAAANAGAAAANGAGGCCAAACCAANGGCAANAAACACCG

Sequence 573

GCCGGCGCCCCGGGCAGGAACANAGCACTNAGGNGNGNCGGAAACNCGGCANGGGAC AGGACANAAAGGAAAACANAAAAGANGCAAGGGGACACGACACANANGAAAGGNGAAGGG CAACGNCGACCAAACGGGGGNAGAAGACAAAAAACCAAAA

Sequence 574

Sequence 575

Sequence 576

GCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACGCGGGGTAGGAGCCTCTCCCCTAC TGCTGCTACACAAGACCCTGAGACTGACCTGCAGGACGAAACCATGAAGAGCCTGATCCT TCTTGCCATCC

Sequence 577

Sequence 578

CTGGTTCTTCCCGAAACTCCCAAATATCTATGGAGAGCTGTTCTAGCTTTTGCACAGGGA ACCAGTGGACAGAGGTATCATTAAACATGTCCATGTATTGNGAAGTCTGAGGAAACTCAA GCTCCTCCAGTCCTTTTAAAATCTTTGCAATGTAGGGATAATTTTTCTGCAGAATCCTT

CCAACAACCTCTCCTCAAGTCCTTTGAAACTGTTCCCAATGATGACCATCTTAGAAAGGG CATCTACTGACCAGTTACTCCATAAAAGATTGTTGTACCTCGGCCGCTCTAGA Sequence 579

PCT/US00/33312 WO 01/42467 102

### Table 1

TTCCTATTTAAGCTTATAGGATGAAAATATATAATTAAAG

Sequence 580

TTGGAGCTCCCGCGGTGGCGGCCGAGGTACCATCCAAATGCTTCCCTGGTCTTGATGAT TG

GAATTAAACCCAATTTGGAAACAACATTGACCCAGTCAAAAGCTTCTAATGGTTTCTTT

TCTTCCTCCAGTTTTAGTTTGCTTTTATTAAAAAAAGAAAATAGTGCATGGCCATAGCT

CTTCAGTTCTCTTATTGCAGACTAACCATCAGGATGGTATCAAAGCACAAATACTTTGGA GGGGAATGCGTTGAACTGGGGCAAGTACCTGCCC

Sequence 581

CGTTGCGCTCACTGCCCGCCTTTCCAAGTCGNGGNAAACCTGGTCCGTGCCAGGNTGCAT TAAATGAAATCGGCCCAACCGCCGCGGGGNAGNAGGGCCGGTTTTGCCGTTATTGGGGG CGCCTCTTTTCGCTTTTCTCGCTTCACTTGACTTCGCTGGCGCNTCGGGTTNCGGTTT CG

**GGCTTNGCNGGTCGNAGGCCGGGTANTTCAAGTCNTNAACTTCAAAAA** 

Sequence 582

NTNGAGCTCCCCGCGGTGGCGGCCGAGGTACCAAATTGTTAAATACTCGNAGGCCTTTAG GAACCTGTGACTGANTNCATAAATANCAGANCCTATATTGTGATGNTGGTNAAAGGACAN **GTGCTCANCTTCCAATTACA** 

Sequence 583

ACCCTCCTGGAACCGNAATAAGTTNNTGGGGGGGGTNAAACCCNGGNCCACNGAATNNNC GGACCACANGANCNAAACTNAAGGNCTAGCTCANAGAAAGCAAGNGNCAAGCNGGGCANT AGCTGCTGCTTCCCCTGGNGGAACATNGCCTGCTNCCTCATAANCCATNNCCAGACAAGC AAACATTNGTTNGGCAAAGCCGACANCNACNCCAACNACAAGAGACACTAAAGNGCNNGC NGGGGGGCTNCCAGGGGAGANGAAANGGGAAGNCGGGCNGCAGCAACNCNGGNCAAAAA AAACACCAANNNCNGGGGCNCAANGGCACNAANCAGAACGGCNCGCCCNNNGGGANCCAC **AGCNAAGAACCGGCC** 

Sequence 584

TTGGTTATACAACATTTGTTTAATAAATGCANTITNCAAAGCTACACANGACTTAGATA

TGAAGCAGAAAAGGTGGTTTTACAGTCCCTGCATTAACCTCTAATTCTTACTACCCTGGC CAAGAAAGCATTTTCACCTCCTGCGCTTTCCTTCCTGTGTGCTTGTGGTTGTTCTTT CT

TCTCAGGCTTTNTNATTCTGATGCTGAGATAGTTCTGTTCACTTAGCAACTTGGGACA

GACACAGGGTTTGTTCTGTACAAGCAGGTTATCCAAGAGGCATCCATACCCTGGGTTTTC CTCCAACCATAAGGAAAATTGATGCAGCTGTTTCTGACAAGGAAAAGAAGAAAACATACT **TCTTTGCAGCGGACAAATACTGGA** 

Sequence 585

AGGTACCTGGGCCACCAAACACAGCTGGACTCAATATATGGGGAAGGTAAGTGTCCTCAG TTTTTGGAGAGAGATTACCCTCTTCCAAAAGAGTGCTTGATTCTGGTAGTCCAAGCTGTC TCCGTCTGGTGGCACCCCAATTTCCCCTGCCTAGACCCACCTCCTTTCCTCAGCCCCCTT CGCCTGCCGCTGAAAAGTGAGAGCGGGCTCTTGCGTCCCCGCGTACCTGCCCG

GGGGGGNNAAACCCNGAAGANGCGGNNNACGCCNNNCAGAGCCACANNATTTTTGGNCGA AANAGGGGNCCAGNNCCGAGGAAGGNGGAGGAGGNCNGNAGGNACCNNGGGCGGNNNAGA ACNAGGGGANCCCCGGGCNGGAGGAATTTTNNATTTTTTTAGGGGGGGNGGGGGNNCCC CCGGGGGGACCGGGACCCAGNNNCCNGNNNNGGGGGGGG

Sequence 587

ATTGGAGCTCCCGCGGTGGCGGTCGGGTCAGCTTTAAAGCATCATAATGACTAATTATA GGTGAATAATTTTACAGACAGTCTATATTCTAGGAGGCAGCTGTAGGCGTTTTAATTGGA AATAAGCATTCTGAGATAATGATAATAGCAGTGTAGAAAAAATGAAGCTAAAAAAATTCAA AGTGTTGAGAATCCTCCTGTCCTTCTGGGATTTTTATTTTAATCATCTCCTCCACAGAG

ACAAGCAGNACTTTTTTTTTTTTTTTTTTTTTTTTTGGGGGGTTATTTTATGCACAAAGAGCC
ATCGTGGTTTTTTATTAGGTAGATGCCCTGGATAATCCTTTCAAGGAAGATCACTTAGT

CAACTTAATGAAACCAATATCCTTCGCATAC

Sequence 588

Sequence 591

TTTTTGAAATTTACTGACCTGGAAGAATACTCATAATGCAATGTCAAGTGAGAAGCAGGACAAAGA

Α

Sequence 592

AATTAAAAAAATTTTTTTTTGTAAAGACTGGATTTTGCCATGTTGTCCAGGCTGGTCT

GGATTCCTGGCCTCAAGCAATTCTTCCTCCTCGGCCTCCCTAAGTGCTGGGATTACAGGC ATGAGCCACCATACCTGGCCACTTCTTCATTCTTGTTGGCTTTGCGTNCCCGATTTAA

TTGGNGAGAAGTTCCTTCGGCTGGGCTGAGGACCCGNGGTCATGGGTGGATCTCATGGAGAGAGGGCNAGGACAG

### Sequence 593

GTGNATTGAGCTCNCCGCGGTGGCGGCCGCCCGGGCAGGTACATAACTCCCGCAGGATCT CAGGGCCTGCCGCCCCATTATGATGATGTCGAGGTTTTCATCCTGCAGCTGGAGGAGAG AAACACTGGCGCCTCTACCACCCCACTGTGCCCCTGGCACGAGAGTACC T

#### Sequence 594

CGAGGTACAGGTGCGATTCTGGATGACAAAAGAAGATGCTTACTTCACAGAAATTCGAAA TTTCATTGGGAACAGCAACCATGGCAGCCAATCTCCCAGGAATGTGGAGGAGAATGAA TGGCAGTCATTTTAAAGATGAAAAGGCTTTGTCGAGCGGCCGCCCGGGCAGGTACTTTNT TTTTTTTTTTTTTTTTAAGGAGCTTTTATTGTTTTAGTAATCTTAACATAACTTAA AATAAGAGAGGGGAAATGACATCTGGAGATCTAGGTATGTGGCCCATTGCAATTGAGCAC ATTTCTTGGGTCTGTTTCTCTATCTCTAAGGGCAGTCTCAAAACCCCAGC

# Sequence 595

# TCCTTCCCAGAAANAGAGAAATTTTGNTNAAACCTTCAATNT

Sequence 596

TGAGCTCCCGCGGTGGCGGCCGCCCGGGCAGGTACTATTTAAGAAAAGAACAAGGTTAAC
TAACTAAAAGCAGGAACTCACTTATTTTTTGCTCCCTAGCCAATTAAAAATAAGTTCAT

AAAAGCACTTGAAATTATATATTTAACCTGAAAAAAAAGTTGCTAAAATTCCAATATAAA TGTAAATATCTTTAACTTGCTTAACCCAGCTATCCCCAAAACAGTGTAAGTGGGGCAAAA TGTTCAAAAGAAAAATCATCCAGTGCACGTAAGATGGGGCACCCAAGAAGGCTAAGCCTT CCTTGNGCCGCGTACCCTCGGGCCGCTCTAGAACTAGTG

# Sequence 597

TGATGTTTATTTTAATGCATCTTAGTCCACACAGTTGGTATAAAATCAGAAAATGCAAA

CAAAAACAAAAGGTCTGGAGTCTTAGCATCAGAAGGGCACCATATATACATCTACAGTTG
GNGGCCAATACAAGTCATTGCCAGACAGTCCTTGGAGGCACAGAACAGCCCAGACCCAGC
CAAGCTCTAGGAACTTCACGGGTCCCAAGGGGTNTAGACCNCTTGTTCTNGATGCTCCGA
ACCCGTAAAAAAAAAATGTGGGGAAGTTGATGAAGGCTTTTATGATTTACTCATTATCCCC
GCGTACCTNTGGC

# Sequence 598

TCACGCGTCCGGGAGGTAGTAGAAAGGCGCTGGGTGTTCTAAAATAAGGCTCTCCTGGCCACGCTGACTCGTCTTCCTTGTGTCTCTACAGTGGACCGTGACTCTGGACCCAGACACGGCTGACTGTCTTCCTTGTGTCTCTACAGTGGACCGTGACTCTGGACCCAGACACGGCTACACTCCCAACAGCCCGAGAGGTTCAATCTGTTTCCCTGTGTCTTGGGCTCTCCATGCTTCATCGCCGGGAGACATTATTGGGAGGTAGAGGTGGAGATAAAGCCAAGTGGACCATAGGTGTCTTGTGAAGACTCAGTGTGCAGAAAAGGTGGAGTAACCTCAGCCCCCAGAATGGATCTGGGCAGTGTCTTTTTGTGGTATGGGAAAAGAATATTTGGGCTTTTTTACCTTCC

ATGACTGGCCTACCCCCGNGGNCCCCCGGTTCCACCGGGGTGGGGGGAT Sequence 599

105

### Table 1

ATAGAGGTTCTGACTCCTCAGGAGCAAAAAACATAACCTGAAGAGGGAGAAGTGGATTT GGGGTTCACCATTTCTTGGGGCACACTTGATTGAAAACTGANACTTCTGAAGAAAAGGCC AGAAGATACAAAGACAGNCCATNCCAGTTGAATGCTGTCTTCCAAGAACAGAAGAAAATG ATCCAGGCCCAGGAATCCATAACACTGGAGGATGTGGCTGTGGACTTCACTTGGGAGGAG TGGCAACTCCTGGGCGCTCCTCAGAAGGACCTGTACCGGGACGTGATGTTGGAGAACTAC AGCAACCTGGTGGCAGTGGGGTATCAAGCCAGCANACCCGGATGCACTCTTTNAGTTGGA ACAAGGNGAA

Sequence 600

AGGTGACACAATGGCCGAAGGCTCCATGGCGGCTGGCTTCTTCCAGCCCTTCATGTCACC
GCGCTTCCCAGGGGGCCCCCGGCCCACCCTGCGGATGCCGAGTCAGCCTCCCGCAGGCCT
CCCTGGCTCCCAAGCCCCTCCTNCCTGGCGCCATGGAGCCCTCCCCACGAGCCCAGGGGC
ATCCGAGCATGGGCGGNCCAATGCAGAGGGTGACGCCTCCTCGTGGCATGGCCAGCGTGG
GGCCCCAGAGCTATGGAGGTGGCATGCGACCCCCACCCAACTCCCTCGCCGGNCCAGGCC
TGCCTGCCATGAACATGGGCCCAAGGAGTTCGTGGCCCGTGGG

Sequence 601

AGCNCTNAGCTCGACGCGAAAAAAAATAAAATAAAAATTAAAAAATCTGTGCAATAATTT
TAAAATGTGCTCCCAGGAATAGACACAAATGTTTTGAGTATCTTTTAAGCTGCATTTTC

TTTAGTGATGCATTTGTCAATTGCACTGAATTTAAATCTGAAAGTCAGAGGTGATTATT

Sequence 602

CAAGATCGGNGCAGCGACGCTGCGGGCTACCCCCATGCCACCCATGACCTGTAGGGACCA
CCTCTAGATGCCTACTCGATTCAAGGACAACACACCATNTCTNCGCTCGANCTGGCCAAG
CTGAACCAGGTGGCAAGACAACAGTCTCACTTTTGCCATGANTGCACGGNGGGACNCGGA
TTCGCCGGAATNTGNACTCCAGCTCTCCAGAGGATGNAAAAGGCTANTGGGCAAAGTTTT
TGGGATGCCATTCTANCTCATAACCCACCCCANTGAAACTNCAACCCNATTTCNCAAANA
NAACNTTAAAATTGGGCTTGTNAATAAANTCCNNGNGCCGGCACAAAGGGCCGGCCCAAA

Sequence 603

GTCCGGGAAAAATTACCTGTCTTGACTGCCATGTGTTCATCATCTTAAGTATTGTAAGCT

AATAAAAAACCTGTATATTTTACTTTGTTGNAGATAGTCTTGCCGCATCTTGGCAAGTT

AAAATGNTTTTGNTTTTAGNACCGNAGNATTCAATACNCCGGTTAAAAGGCANGGNAAAT TNGACCAAAAAGTCTTTGGCTTTTTTTCTTGGGTAATTGNTTTCCTAAANGNTGGTTA

NTTGGTGGANCTTTTTTTAACCTGGTTTAATAANTTTAAAATNTGGCCCCAAATTAATT

NAGGTTTAAAAAATNATTAAGGNAATTTA

Α

Sequence 604

CCCGCGTCCGAGACAATACAAAGTTACATTTTTGGACCATATTAAAACTGCAAGAAGACA

106

# Table 1

GGGGTCTTACTGAAGATCTTTTAGAAAACTTAAATCCTGTCACAGGATATTTAGACATG

GNATTTTGGGGAACC

Sequence 605

CTCCCGCGGTGGCGGCCGAGGTACCCAAATACCACTTCAGGAAATCTGGCCAGATCACC
TGAATCCAAATGTTCTATTAATTCAATACACGTTATCAAGTCAAATCCAAGCAAACGAGA
GTCTCTCCCACAACGGAGCCATGATACAATGTGATGGTCAAATTCAGATCCCGAGGTTT
CAGAAAATCCCCCAGGAAAGGAGCTAACGAATCCCCTCTCCATCGTAATTTATCCTCATT
AATATCTACTCCAACAAGCAATTCAATGCATGGATTGACTTTTAGCAGCCTTAAGAGTGA
AGTATCACCACCATCCCAGGTCTGCAACCTTCTTAGGCTCATGTTGATCCACTAAATTTT

**AACGAACTGGTACCTGCCCG** 

Sequence 606

CTNCCGCGGTGGCGGCCGAGGTACTTACAAATAATTACTGGCAGTAGGTTATAATTGGTGGTTTAAAAATAACATTGGAATACAGGACTTGTTGCCAATTGGGTAATTTTCATTAGTTG

Sequence 607

Sequence 608

Sequence 609

AAGCTCGACTCTCCCTTTGGTAAGTCCGAAGCA

Sequence 610

Sequence 611

GTGGCGGTCGAGGTACTTANGAGAAATTGGCATGCTTTGCTAATNTTTATGCAGAGGTAA
CCATGTTGANNACATATGTANTGTTGAGAGGNATGTCTAATTTTATGGTCNTAGGAAAAA
TTAAAAGAAAACTGCTGCTTTCCTGAAGTCTGAAATANAAATGTTTACAACTTGACNAGG
ATCCATTTGGTGGCTAGNCTCGCCTTCCAGGGNGGNAAAGAGAATATGCCAGTTCTGTNG
TATGGACTNTTCACANAAGCTAAGGNAGGGGNAGTTCCTTTCTTGGTGGNGACAAGTTCC
TGCNCACTTAATTTTTCCCNTCCTGNCTTCNAAACCTGGGAAA

Α

Sequence 612

GAGCTCCCGCGGTGGCGGCCCCGGGCAGGTACCAAAGAAGATGCAGTTCAAAATACTG CCAGTTTTCCAAGAAATTTTGTAAAGTTGAACATGGCCATCTACTCTTGCCTTAAAACT

Sequence 613

CCAGAGNTAACGAAACATTCTTTATAAAGGTTTGAACCCNCNGTTTNAAAGCCAANACCA
TAATTTAATTACAAANGGATAAATATGGTAACGGGTATTTACAGAAGGAAGGGNGTTATT
ACGGAAAAAGCTAACGGCACGACGTTTATTTTTCCCCCACAATCTTTCATACAGGAACTA
ACAAANTGAACTTGCAAAAGCACTAAAACATCACATGTAAACCCAGCTAACAGAAAAATA
CATTCACAAGCGTTGNTGGTGGGGGTGNGNATNGTGTGNGCTAAGGGNCAATGGGCNGAA
GAAACAGAAGGGAGACTNTGGCACGGCTCAATTCTTTCCAGNCNANAGNTACATGGAAGG
TTACAANCAGGGTGCCCCANAAAAAAAGGNACACCACTANTCAATACCCNCCAATACAAAA
AGAAAACCAATNTTCTTCCNCCANTACCTAAAAAAAGGAAACCCGGGGTAAAC
Sequence 615

108

# Table 1

NGCCTTNATCAAACTATAAGCTGNGGAGTGGCCAATATACTCCATTGNGATTATACACTG ATTTCCATCACCTGCCTTTTTACTATCAACTCTTATTAGA

Sequence 616

CGGCCGAGGTACTGTGCCCTCTTTCTTACTAGGTGACCGAGAGTGGTTTTGACTCCTGTG
GGTGCTTGAAGTCATTCTCAGGGGTCTCTATGACCTTTTCCCTCCTGCAGTTCACTCT
AG

TTTCTTCTATTTCATCATCCCGCACTGCTCTTAGCATCGAAGTCACTGTCTGCATCTGG

TNTCTACTTCACATCAAGTTTGAAGAATGCATTTCTCTTGNGGTATTCTGTTTTTTGAACTTCATTGGAGAAGCCCCTTGATTTTTCTTCCTTTATACCAGATCTGGCTTCACG

**AAGCTGCATTTAGGTACCTGCCCGGGCCGGNCG** 

Sequence 617

Sequence 618

Sequence 619

Т

TTAGTATCTGAGTGGAAGTACCTGCCCGGGCGGNCGCTCTAGAACTAGTGGGATCCCC Sequence 620

GCCGCCGGCAGGTACATTCTAATTTTTATGAGACATAGATATGTATTTATAAAAAGATA GATGGAAAGAGAAATTAACTTAATTCTAAGAGCCAAATTTACTCAGAAGGTTTAGAA ACACCAAAATTAACAGCCAGTTTTCTTGATTTTCTTCTTGAAGAAGAAGAGATTGGTGTTGC 109

# Table 1

GATTGTGCACACCCCTGGTATTCCCCCAGCCATGGGCATGGTCCCAGAATATAAAGTAT GATGGAAGGGCTTCCAGG

Sequence 621

GGTGGCGGCCGAGGTTAAGGACGCCTGCCCATGACAGAGCCTCAGGAAATCGCGATGACA GTTTACAGCAGGAAAATCCGTGGAGACAGCAGATCCCGAGAAGCGGCGATGTTTGCGTAG AACCCTGTACCTGCCCG

Sequence 622

CCCGCGGTGGCGGCCGAGGTACATTTATTTAACATAAAAGGACAATAAGTTTACTTTGTA
TCTGAACTCAAAACAAAGTAGTTGTATATTTTAACATTCAAAATTGGGATTTCCCAATG

Sequence 623

CCGCGGTGGCGCCCCGGGCAGGTACAGCCATTGCTCTTTGAGTTTGGTCTGGCTAGC
AAAAAGCTGGCTGTTTATGTAAATAAAGCCCCTATAGTAATTAAAATTTAAAAAAAGTT
TTTTAAGCTGGCTGTTTTCCTACCACTTCAGAGTCCTTGACCCCGTAATTTAGGGTCC
CC

TTCAGATTTGCAGACAGAAACAAACAACAAAACAGTTAAGCAAAACTAACAATGGTCACA CAAATTATACAATTTCTGAGTGCTCTAAGTGCATTGGAAGAAAGCTGAAACTCCATAAAA ACATCACCTGCCTTCCATCATCATGAAAGCAGGAAAACTTGCCTTCTTGTTGGGAGCAAG TAAAACTCCAAAAAAAAGGGTGTTGTACCT

Sequence 624

CCGCGGTGGCGGCCGAGGTACGGCGGGGGGGCCCCTGGATACCGCAGCTAGGAATAATNG GAATANGGACCGCGGTTCTATTTTGTTGGTTTTCGGAACTGAGGCCATGATTAAGAGGGA

Sequence 625

CTCACCGCGGTGGCGGCCGGCCGGGCAGGTACAAACTTTGATCTTCTTTGAAATGTGGTT GTCCACTNGCTTTTCTGTTTCTGTCACAGTAGCTATAAACAGCTGTTTAAGGATATCCT

ATCTAAATTTCTGCCAATGAGGACCAATCGATTTGTTCTCTCAGTGTCATCCTTCCAGC

CACTGGAGTCTCCTCNATCATAGAGCTCATCCCGCGTACCTCGGC

Sequence 626

NCTCCCGGGGTGGCGCCGCCCGGGCAGGTACGCGGGGATGAGTCCTAGGAGGCGCTGG CTCTTTGGCGGCTCGGAGGAGCGGCTGCTGCTGCTGCTGCTGCTGCTGGTGGCCCCTTTG CAGATGTATTGCTGTCCTTGAATATTAGCCCATTTGAAAACGCCTGGGAAGTTCAGCCAT CAGTATGTCAGTACCTCGGC

Sequence 627

Sequence 628

Sequence 629

CCGCGGTGGCGCCCGAGGTACAGACGACGTCACCGTATATCTTCTTTTCGGCCAGTGGA GGATATCACCGAAGAGGACTTAGAAAATGTTGCCATAACTGTTCGAGATAAAATCTATGA TAAAGTTCTGGGTAACACGTGCCATCAGTGTCGACAAAAGACCATCGACACCAAGACAGT GTGTCGGAACCAGTTGCTGTGGTGTGCGAGGACAGTTCTGTGGACCATGCCTGCGGAACC GCTATGGGGAGGATGTCAGATCGGCATTGCTGGACCCGGATTGGGTGTCCCCCCTGTC GTGGGATCTGCAATTGCAGCTACTGTCGGAAGC

Sequence 630

CGCGGTGGCGGCCCGGGCAGGTACATAGTGTCGCGAACTCAAATCGGCATTTAGAT AGATCCAGTGGTTTAAACGGCACGTTTTTGCTTATAAAAAAAGTGCAAAAAAAGATGTGGT TTACAAGTTAAAGCTACAGAATCCCTTTTTGCTGTAATTGCACCAGTTTTAAAGCCTCT

GCAGAGCAGATTCGTTTAAAACTTTGTTTTTCTTAAAAGCTTACAGTGTTTGGCTAATT

Sequence 631

TTTGTCTTGGGCCCTGTAGGGACTACACTTCACCTCCACAGTTGTGACAATGTTAAAGTC ATTGCTGTTTGCCATCGTTTGTCCATCTCTTCTACAACAGGTTGCATCTTT Sequence 632

AGGTACCACACTCAGGGCAGTTTCCAGCTCCTCTCACAAACAGTAAATCTACACAACTTT CACAGAGAGTGTGTCCGCACACATTCACCATCAGCTTCAAGGAGGGGTTCCGATATTTGG TGGTCTTACACCGAGGGCAACCCTGATCGTCCATGGCGGTTTCCCTCCTACAGACTCTCG CAGGCGCCTGTTTCAGCCAGAGCCACCTGTACAAGCCCCCTCCCCGCGTACCACCACACTGT CCCAAATTACCTCTTCATTACCCAAATCAAAGAATCTTTCTGTTTTCCCAATCCTCAAA

GGAATGAAGAAAACCAAAGAGCAAACTCAAAAGATGATTTTTACCATAAACCTCAAATG
TGGCTTAACAAGTACCTGCCCGGGCGG

Sequence 633 GCCCATTGNTGTTTGTTTGCTTGAAGACCAAGACGGAGTTGGGCCTCTTGATTCCC TGCCCGGGCT Sequence 634 GAGCTCCCGCGGTGGCGGCCGCCCGGGCAGGTACTGAAAACCACTTCCAGAGTCTAAAG CAGCTCAGATGTTATCTCTGGGGGAATTAGTGTTCCCCTCATTTAGCAACCTCCATACCA CAAGGTCTCTGTCTGTAGTTACTGGGATTATCCAGATACACTATCAATGATACAAATTC Α TAGGAGTATTAATGCATTTCTTTAAACACAACTTGATTAAGAAGCAAATATGTTAAGCA TTTTCTTTTTCTGCTGCTAAATTACAGTTAGACACTTCAGTATCTTCTCTTTACATGTGT TTTATTCTAACTCAGCACTTCAGAAGCCTTTTTGAGTTACAACAATATTTTAGTTTGCCT CATCTGTAGAGGTAAAATTTCTATATTACCAAGCTCCAGAGGAATATGATATTTTACAGG CACAATTTTCTGGCTGTAGTCCCTGGGGCATTTCATTTGCTGGCCTCCA Sequence 635 NCTCCCGCGGTGGCCGCCGAGGTACAGATGATGAAGCTTCCAGAGCTTATCTGTCTCTTA TAATCTTTCTATAGAAATGGCCACAGCATTATAATATTCAAAATATGGAAGATTGCAGT TGAGGATTTTTANGAAAAAAAATCAAAGGACTTGCCAAAAGGATAACTACATAACAGAT ATGACAATCTACAGGACAAAAAGACAACATGTCACCAAATATTGTTCATACAACAGCGTT AATGGAAAACAGTAAAACACCTTTTAGCAGTGTGCATGTTAAGTCTTTTAGTAAGATTA CTGTAATGAGGTTTGAAAGTAAATCACTTAGTAGACAAAGTAAACCACCACAGAACCAGG AATAGCACCCATCACTGCTGCTTTGTCACTCCAGAAAGCTGAAAGTCAACCCGAACAATG AAAAAAAGTCAAAGAAGCATTTCCCTTTGAATTCAGTCCTAAAAAATATGAATGCCTTATA ATTAATTTCAAAATAAGTATCTTACAAGTGTTTCATGAAACATTGGTTTT Sequence 636 GTGGCGGNCGAGGTCTAAAGGGCAAGGTTCACCACTACAAAAAGGAAGTTGTCTAAAAGC AAGAATTCAATTAACNGCTGGGTAAGAAAAGTCAAAACACTAATGAGTTGTCCATGAAGC CAACTGCTAAGAACGCGCTCAACTATACCGCCGACATTGAAGACACTACGCACGAAGCCT TACTTGGCGAGTCTGAATTTCTATTAACTAAGGGCAGAGTGAGGGAGAACAAAGAGCCTA TGGGATCCCCGGGCTGCAGGGAATTTCNTATATCAAAGCNTTATCGATACCCGTCCGAC CTTNGAGGGGGGGGCCCCGGTACCCCAGCTTTTTGTTTCCCTNTTAAGNGAGGGGTTAA ATNTGCCGCCGCTTGGGCNTAATCATTGGGNCATAGGCTTGTNTTCCCTGNGGTGAAAAA TTGNTTAATNCCGCTTCACAANTTTCACCACCAAACCAATACGGAAGNCCGGGGAAGCAA TAAAAGGTNNTAAAAGGCCTTGGG Sequence 637 AGCTCCCGCGGTGGCGGCCGAGGTACAGGAAAGGGAAGCACAGTTTGGAACAACAGCAG AGATATATGCCTATCGAGAAGAACAGGATTTTGGAATTGAGATAGTGAAAGTGAAAGCAA TTGGAAGACAAAGGTTCAAAGTCCTTGAGCTAAGAACACAGTCAGATGGAATCCAGCAAG CTAAAGTGCAAATTCTTCCCGAATGTGTGTTGCCTTCAACCATGTCTGCAGTTCAATTA AATCCCTCAATAAGTGCCAGATATTTCCTTCAAAACCTGTCTCAAGAGAAGACCAATGTT

CATATAAATGGTGGCAGAAATACCAGAAGAGAAAGTTTCATTGTGCAAATCTAACTTCAT GGCCTCGCTGGGCTGTATTCCTTATATGATGCTGAGACCTTAATGGACAGAATCAAGAAA

CTTT

Sequence 638

Sequence 639

CCCCGCGGTGGCGGCCCCCGCNCNGGTACATGGCCCTTAATNCCATNAGATTTGTAGA TCTTAACCACGGCAGGTCACCGAGGCCTCGGAANTCCCTTTNAGCTCCAGCTTTACCCAC ATCAGCTGCTAGACGGGTACCT

Sequence 640

AGACGATTGAGCTNCCGCGGTGGCGGCCGCCCGGGCAGGACGCGGGGGGCTGTCTCACCGG TGAGACCTGGAAGCGGGCGAGTCTCGTGCTGTGTCGGACCTGCAGTCCCTGGCCTTCCGC CACCATGGAGTACCT

Sequence 641

CCCCGCGGTGGCGCCGCCCGGGCAGGACGCGGGTCTTCAGAAACCAGGCTGCTTTCAGG
AACATTGCTGTGGATTCCCAGCTTTCAGACAACACATGACTAAGACAGAATGAGACCACT
CTAGTTGCCTCATGGGAAACTCGGGAAAAGACTGCAAAAACAACATTGTTTCTCCCTTTG
GAATTCTGGAGTTATAAGGCAGAGGTCCCCCATCTTCCCGAACTGGCCTATTCCGCTAGA
AGCAAGATGGCTGAACTCAATACTCATGTGAATGTCAAGGAAAAGATCTATGCAGTTAGA
TCAGTTGTTCCCAACAAAAGCAATAATGAAATAGTCCTGGTGCTCCAACAGTTTTGATT

TAATGTGGATAAAGCCGTGCAAGCCTTTGTGGATGGCAGTGCAATTCAAGTTCTAAAAGA A

Sequence 642

TCCCGCGGTGGCGGCCGAGGTACTTGGAGAATATTTCCACAATAGCCGATGACTTGTTCT
TGTTGACAAGAGAAAGTTCTTTGGCTGTTACCCTCAATGATAGTGAGGTCCATTGCCGTC
TATTAAATGGAGATGATTCCATCTTGTCTACAGACACTGAAATACCTGGCTAAAAGCCGC
CTTTCCTCTGCGCTGCTACCAGCCCTGTCACAGGTCCCGGCGCTCTACCTCCCCGCGTAC
CTGCCC

G

Sequence 643

GCAAGNTTTTTTTTCGGGCAGNCTGTGAATTTTCAACCTCCTTTTT Sequence 644

CCGCGGTGGCCGCCCCGGGCAGGTACTTCAGGGAGGCCTATATATTGGCACCCAAGG
AATGCCAGGACTGCCACCTGCTCCAGCGTTAGCCTCACTCGTGTGCTTACTCACTTT
GACTGCCTTTTTGTCTATTTCTGGGAGGTTGGTAGAATGAAAGGGATGCTCCAAGGCAAG
CAGATGGCCTGTCCACCTCCTATATATTGACAGTGCCAATGAGTGTAGAGTCTTGCTACA
AGAAACAAAGTCATGAGAAATGCCAGGCTTCCTGTTACACCCAAAGACTGCTGGCCCTCC
TACTCTATCCTTTAGACCAGAAACTTTTTCTTCTAAGCACTTGCCTACCGGGAAGGTT
GA

**GGAGTCTTGTTTTACCGTACC** 

7

### Sequence 646

ANNGAGACCAAGAAACCCATNNGGTGACCACTAAGGGCAACTTATCAGNTTTGATTNCAT
GAAGGGATAGGATGTCTTGTATTAGGGTNGGAGAGTCCCAGGTAAATCTATGCTACTNCC
CCCCTTAANAACCTNAGNNTCTNGCAACCCAATTNTAAACNNTTTGNATACNCTTGAAAA
AAGGCATTCTGNCTTTTNAGCNATCCGATTTGGCCTGTNCACAAACTCTGGGGGAAAGAC
TGGTCCAGTTGNNAGAAGGGGAGTTGGGAGCNTCCAGGTTTGGAAAAGNAAA
Sequence 647

ATAATTAATTAGGCAATGATNCAAAGATGTTTTGTTTTAAAATTCANAACCCNCCAAAG G

Sequence 649

CTTCTGCTGTGCAGTAGGGGGCATCAATAGTTCATTTTCTTTTTATTGTCTGCTACCAT

CCATTGTATGGATTCAACCTAGTCTGTTTATTCATTCTCCCAGGCTTTCCACCAGGCC AT

CTCTTTCACTTCGGGGGCACCTTTCCCAGGGAGATGAAGAGACACAGGTTGGCCTCTGCT GGGACTCCACATGTCTCCCCGCGTACCTGCCCG

Sequence 650

TTGACTCCCGCGGTGCCGCCGAGGTACTGAGTGGGGAAGAAGGTAAGAAACACGTTGAT
TAACACCCTGTGTTCTGGCAGGTGGGATCAGCAATATGTAATCCAACTCACCTCCATGTT
CAAGGATGTCCCTCTGACTGCAGAAGAGGTGGAATTTGTGGTGGAAAAAGCATTGAGCAT
GTTCTCCAAGATGAATCTTCAAGAAATACCACCTTTGGTCTATCAGCTTCTGGTTCTCT

CTCCAAGGGAAGCAGAAAGAGTGTTTTGGAAGGAATCATAGCCTTCTTCAGTGCACTAGA TAAGCAGCACAATGAGGAACAGAGTGGTGACGAGCTATTGGATGTTGTCACTGTGCCATC AGGTGAACTTCGTCATGTGGAAGGCACCATTATTCTACACATTGTGTTTGCCATCAAA TT

GGACTATGAACTAGGCAGAGAACTCGTGAAACACTTAAAGGTAGGACAGCAAGGAGATTC CAATAATAACTTAAGTCCCTT

Sequence 651

GACTCCCGCGGTGCCGCCCAGGTACTGCGTTATGCAGAGGTGTCCAGCCCCCTTCCTCT
TCCTGGAAATTAACATTGGCTCCACCTTCCAGCAATTGCTGGACCAGGTCAACATCTTCG
TTTTGAACAGCTTTAATCAGCAAGTGATTGTCTTCCACTGCAGCCCTTCTACCGCTGGAG
GACGTGGGTCCCTCCTGGGGGTTGTTATGATCCCTGCTCTCCATGACGGTAAATGCCACC
TGCTACCACTTTTAGCCTTTTCCTTGAGAAAATGCAAATTTATCTCCTAGCACTTAATC

AAGAAGCTTTGAGTGTAAATTGGGATTCTCTGGCAACAGAGCAGCAGCAGTATGAAGAAGGAA CAATGTTCTCAGTCTTCTGACATTCCACCTGCTCAACTCAAGACGTCTCAATTATTCCT

Sequence 652

Sequence 653

TCCCGCGGTGGCGCCCCGGGCAGGTACCTGTGAACTGAGGAATTATAGATAAACCTT AGGTCAAATCATTTCGCAATTGCATTGGTGGTATTGAAAAATGATGAGAGATTTCTCTGACA GAGAGCTTTGTCCTAGTTTTTGTTCTTCATAGGTCAAAACTGGCAATATTCTCTTGTCT

CAAGATAAAGTGTTTGTGCTTCTATCACCATATGCATGAACATGTAAGAATCAGATACAA TTTCTGCTTCATCAGTTTCACATGTTCATGTTGTCACTGAAAAAATGCATCTACTGTTT

TAGCTCCCAAGGAGACCCCAAATCCTTTTTTCTTTTGAGATGGAGTCTTGCTCTTGTT

CCCAGGCTGGAGAGCAGTAGCGCGATCTCAGCTCACTGCAACCCCCACCTCCTGGGTTCA
AGGTGATTCTCCTGCCTCAGCCTCCCCAGTAGCTG

Sequence 654

## Sequence 655

## Sequence 656

#### Sequence 657

ATTGGAGCTCCCGCGGTGGCGGCCGAGGTACATTCCAATGAAGAATTTCTTCATTCTGA TCTCCTAGAAGACAGCAAATACCGAAAAATCTACTCCTTTACTCTTAAGCCTCGAA Sequence 658

CACGGGTGGCGGCCGAGTACCTTGTGGGCATTAGGTCANTNTTGTTATACACTTTCACAA
AAGATTTTATCTTTGATCTCTTGGCGATCTTCTTCTTGCCCATGGCAGCTGTCACTTTG

GGGGGTAGCGGTCAATTCCAGCCACCANAGCATGGCTTGTAGGGGCNATCTGAGGTGCCA
TCATCAATGTTCTTAACGATNACAGCTTTGCGTCCGGAGTAGCGTCCAGCCAGGACAAGC
ACCACNCTTCCCAGGTTTCATGAACTTGCCCATTTCGGCAGCAACCACCCCGGGGCNCTA
CAGCAAAAAAGGCCCCCGGCTGTACTCTGCCCCGGGGCGGGNCCGCTTCTAAGAAACTAG
GTGGGANTCCCCCGGGGCTGGCAAGGNAATTTCCGAATATTCAAAGCTTTATTNCGATA
ACCCGTCGGACCCTCGAAGGGGGGGGCCCCCGGGTTACCCCCAAGCTTTTTT

Sequence 659
CTCCCGCGGTGGCCGCCCGGGCTGGTACGCCCAAGGCATTTAATGCCCACAGTAACA
GGGCTGTTTGACAGTGGCAGAAGAGGACGGGACTAAAGTTACTTTGTGCTGAGAGGGGGA
AAGAAGCACAAAGTTTGGTCTGTTGCGTAATTGAATTTTTAACACTCTTATCCACAACA

ACACTTTTCGTGTCCTGCTGTCAAAGACATCAGATATTACAGATTTTCAAACAG

TGAGCATCCTTTTACGAGCTGGGCAGGTGGGGAGTGGCGTGGTTTTGATGGAGTGAGGAG ATTTGGTTGAATGAACGCTAAGATGGCCAGACNCACCTCTTNGATCTCAACTCTGCAGCC TGGG

#### Sequence 660

CGGTCTCTGTCTTGGCACCTGCAGGAAACAAGCTCCTACTTCCAGAAAAAGTGCTCCTGG GACTCCAGGATACCAGGCATCTGGGTAAGCTACAATGCTTAACCACTTAACACAATCAGG AAGCAACAGCCATGCATTCGGGGAAAGGAACTTCAGTGTTGTGTGGCTTAGTCTCCAGAC CTAACTTTTCTTTGGTACCTCGGGCCGNTCTA

#### Sequence 661

TTGGAGCTCCCGCGGTGGCGGCCGAGGTACGCGGGAGACGACTTTTTTCTCACCATGAA TGTCACCCCAGAGGTCAAGAGTCGTGGGATGAAGTTTGCTGAGGAGCAGCTGCTAAAGCA TGGATGGACTCAAGGCAAAGGCCT

#### Sequence 662

# <u>тпаптиантинниннинниннинниннинниннин</u>

TTT
TTTTTGGNCNANANAACNAGTTTTTTNAATTNATTNAGGGGGAANGNGGGGNGNCTTTG
GANAANCCNCNNNGAGGGCTNTNGGGGNGTNTCCNGNGGCNNGGGGNNAGGGGTNGGGG
NCTNGGGGNGGGTTTNAGGGGCCCNNGNCCCNNGGCCNCTNTAAAACNAGGGGANCCCCC

# GGGCNGGNGGAATTCGATNTCAAGCTTNTNGANCCCNCCCCCCCGGGG Sequence 663

#### Sequence 664

TNCGGGTGGCGCCCCGGGCAGGTACGCGGGGGGGGGGTATCTGTATCGGGCCNTACTGG CTTNANGNGCNNNATTCCCTTCCNNGNCCCCCCCNGGGGGNCCNCAANTAAGGGTTTNGG ANCCNCTNTTTTTTNATCNCGNCAGCANCTTAAAATGCCTGGGAAGATGGTCGTGATCCT TGGAGCCTCAAATNTACTTTGGATAATGTTTGCAGCTTCTCAAGCTTTTAAAATCGAGA C

CACCCCAGAATCTAGATATCTTGCTCAGATTGGTGACTCCGTCTCATTGACTTGCAGCAC
CACAGGCTGGGGAGTCCCCATTTTTCTCTTTGGAGAACCCAGATAGGATAGTCCACTTGN
ATGGGGAAAGGTGACCNAATGGAGGGGGACCACATNTTACGCTTGACAATGNATCCTTGG
TTAGGTTTTTGGGGGACCGAACCACTCTTAACCTGGTGCCCAAGCAACCTTGGNGGAATCT
ANGGNAAATTG

## Sequence 665

GGGTGGCGCCCGGGCAGGTTTAATCTCAGGTCTCCCTCATACACTTCTCAGCCTCA GCACCTAACCCTCACACACACTCCAGTATTGATGCAGTCAATCTTGTATAACATTTTT T

GAATGTCCAATGTGCAAAGCACGATGTTGGAAATTATACAGAGGTGAATAAGACAAAAAC TCTTGCTCTCAAAGATGTCAGTCTTTTTCTTTGCAAGGATAACACATGTAGAGTAAAAT G

# CATAAAGGGGACTAATTTTAAATGTACCT

#### Sequence 667

GGCCGAGGTACTGGAGAGTCGGCTTTGACCATGGCCTCAGCTCAGCTCCAGGTTTGGAGC GGAATAAAACAGGAGCTAGCAAGATGTCTCATCTGAGCTTCCCAGTGCCCAACTTATCTG AGGCCTGGGGCTGAAGCCAGCGCTGACGGAT

Sequence 668 GAAGTCAACCTAATACTCTGGTGCTTACTTTGCAAATCTTTTCCATAAGTCAAGTATTA TOTTAACAATACACTTAAGAAGTAAGGATAAACCCATCAAGGTCCACAGCTAAATAACCA GCAGATTCCCAGAAACTTTATGTATTTGGGAAAAGTAAAATATACAACAGACATATCCCT GCCCTGATTAAGAGGGTAGATAAAAACAAAACATAAAACAATTTTACTTGAGATAGTAAT **AAGTTATTTGAAA** Sequence 669 GGATCAATAAAATCTGTGTTTACAGCGGCAGACTGAAGGACGGGTGCCTGTTTTCAGCC ATGAGGTAGTCCCTGACCATCTGAGAACCAAGCCTGACCCTGAAGTGGAAGAACAGGAGA AGCAACTGACGACAGATGCTGCCCGCATTGGTGCAGATGCAGCCCAGGTTGGACTGAGTC ACTGCCTTGCTGCCCCATCCCCATCCCATCATGAGAAGCTAGGCATTACCATTCCTGTCT AGTAGGGATACATAGTTGGTTGCGCCTAAGTTGCTTCTGGCAGAACCCAAGGAATAAATT TCTCCATATCGTTTNCTAGTTACCCTAATCTCTGCACAAATTTTGTGTGTTACAGAAGC **GATCCAGAGCTTGAATA** Sequence 670 CT TGCCTATTTGCATCCTAAGGGCAAAAGGCTTAGAGATATCAANGGGGCTAATNTTTTATN GNCAGACCATGGCGGATGTAAAATTAGCTGCTTTGGTGTGGGCTGCAAAAATAACAGCTA CCATTGCAAAACGAAAATCTTTCATTGGCACCCCTTACTGGATGGCCCCAGAAGTTGCAA GCAGTAGAGAAGAATGGTGGCTACAACCAACTCTGTGATATCTGGGCAGTAGGAATAACA GCAATTGAACTTGGAGAACTTCAGCCACCTATGTTTTGATCTCCACCCAATGAGGGCTCT CTTCTTAATGGCAAAAAAGTAATTTTCAGCCTCAAAACTAAAGGGCAAAACAAAATGGGC Sequence 671 GCTCCCGCGGTGGCGGCCGAGGTACGCGGGGTCTTCTCATGCTCCGTGATGCATGAGGCT CTGCACAACCACTACACGCAGAAGAGCCTCTCCCTGTCTCCGGGTAAATGAGTGCGA Sequence 672 TCTTTTTCGAACCTATACTGTCTTCTGTAAATTCTTCTTACTACCCCTATGACCCGTGAG CAACCACTTTCCGATGCCAGGGTTCTGACACCTCACCTGGCATAATATAAAGTGTTTT TTTTATACCCTTCCACTTGGAAAGACTACAGAGGAATCTTGCACTGCATAGTTCAAACTA AAAAGAGAAGAGTTAATTACETGAAAAGCAAGAGAAAAAAAGAAGGAGGGGTAAATTTTGAAC CAAGGGAAATCATTIAAGAAGTGTCTGGGTATTTTTCAAATTTCTGTCAGTTGTTACATII GTCATAAGTAAATGTTTAGGAATAAAGGATGGAQACATGCTTATTTATTTAACTCCCC С CNAAAAAAA Sequence 673 GGATTGAGQTCCCCGCGGTGGCGGCCGTCCCTCTTAATCATGGCCTCAGTTCCGAAAACC AACAAAATACGAACCGCGGTCCTATTCCATTATTCCTAGCTGCGGTATCCAGGCGGCTCG GGCCTGCTTTGAACACTCTAATTTTTTCAAAGTAAACGCTTCGGGCCCCGCGGGACACTC **AGCŤCCGCGTACC** 

#### Sequence 674

AGCTCCCGCGGTGCCGGCCGAGGTACTGAAGCCCACCAGTGTCCGGATGGAAGTCTGCAT CTGAGGTTGCTCAGTGTCCCGGTCATTCATTTACACATTTTAACTTGCATTAAAGAGCT G

#### Sequence 675

#### Sequence 676

NCCGCGGTGGCGGCCGCGAGAGCACATGATGACCACGCCATCGTCCAGTATGAGTGGGCA CTGCTGCAGGGGGACCCGTCAGTGGACATGAAGGTAACGCATGTTGTCACTGCTGGCAGC TAGGTCTGCTGGGGCACACCGAGCTGTGAGGGAGGGAGGCCAGCATGCGGTGCTCCTGCC CG

#### Sequence 677

TCCCGCGGTGGCGCCCCGGGCAGGACGCGGGAAGGATTCTGTAAGTATGTAGCAGTG
TTTCTTAGGTAAAAGTCTCTTTTTTGCTACTGAAAGGGAAATGGTCTCTAAACACTGGTC

# Sequence 678

GCTCCCGCGGTGGCGGCCGAGGTACTTGTGGCATGACGTCGATGATCGAGTTCANGGCT NTCTCCANCTNGGNCNACATGATGCCCACGGNCTNGCCCCACCAGGTCTTNTGAAAGACA GNTGACANGAGACATCCNCGCGTACCTGNCCG

## Sequence 679

NCCGCGGTGGCGGCCGCCCGGGCAGGTACTGGTGTTGTGATCGGAACGTGTCGATCCCT
CTTCTCATCACTGCTGCTCCAACTGGATTTATTACTCCGGGAATGGTCTGAGGGGGAAAA
CCAATGTGTTTAGCGTGCCTGCCCACCTGCGCCTGAGCACAACTATCCTGCAATCTGACC
TGCCCCTCCTGCACAGGAAACCACCTTCCCCTCCCAATTGATGGTTCAAACACTGCCACC
GCTGACTGCCCTGCATCTGTGGGTCTGTAGAACAGAAAGGCAGAACAACTTATTTTTTAG
GATTTAACGACAACCGGTTGAAAAAAAACCGGTAGGGGTGTCNTGCTCACAGAGAATAAAG
ATTTGTAGAAAAGGNGCTGAACTGCCAAGGAAGGCATTTCTTGTGCCGTGTCTGGAACCG
TGTATCCTTACTACATCACTGAACGACACCAAAGCACCCCATGCACTTTTTGGGTCCAAC
CT

# Sequence 680

NATTGAGCTCCCGCGGTGGCGGCCGAGGTACAAGGGGAGGTAATGATGGGAGCTCCACT CCTTGGACCACCAGCTGGTTCTGGACCGTATCCCCATGAATCTGTTTGAACGTAAGGAGG AAGTCAAAAAAGTTCTTATTTAGGGTTTCTTTGAGATGTGGGGCCACTTCCATTCCCA

CGGCACAGGTAGGCACGGCATACACCGACACTAGTGGGTCTCCGATCCCTCTGATCATG CATGTCAACCGGGCAGGCACTCTGAAATTCCCGTTTTGGAGAGGAATTTGTTACATTTC

AGGATGGATGCCTCCACGTAAAATCTTGGAATGAGTTCCCTGATGGAGGCAATCTTGAAA AACCAATTTAGGCATGTTTCCTTGGCCGTGTCATTTGCATTCTCTGGAGAAAAGTGAT CT

GGTAAGACGCTGCGGCTATCCACACACATGGAAAAGATGC

Sequence 681

GCGCCGAGGTACCCTAATGTAGTAGTAAATTTAAGGCCTGTCGAGGAAATTTTAACACT
TCCAACAGGTGACTATATCAGGAAGGAGAAAACCAAGTGCTTCCTGCTTCACCTTCTGCT
GCTTTTGGGACTTTTTATGAAGCCTAGGTAGNCTNAGGACANGACCCTGAACCCATTTTT
TCACTGGGAGAGGAAAACCACCAGGCTTCTCAGCTATTGGCTTGGCAACTCTTGGAGTTC
CTATGGCTTCCATCAGGGGCTCCAGGCCCTGATAAGTGGCCTCAGGCCAGGNAGGGAGGA
TTCGGNGTAGCCGGGATTGGGGAGCAGCTAGGTNCAGGGAAGGNTGGGAAAATAGGGGAC
CCANTCCCCCAAAACCACCGTTTGGCCGCNATGGATGGAATTTTGGAGGGGAACTGGGACC
GNTAAGTTTCTGGCATTGCCTGGCCGGNTTGGGATGCCTTCTTCGGGACTGGCTCCCAGG
GCCGAATNTTTTTCAGGGTCTTGCAAGCCCGGCT

## Sequence 682

TTGACTCNCCGCGGTGGCGGCCGAGGTACTCTCGTTTCAGCTGGGCTCTTATGGCCAACC GCTCGGCTTGCGCCGGGGTTTCCGGAGATATGTTGTATTCGGCTGGGTCGAGGGTCT CAGGCAGAGTGCGCAGGCTCGACGGCTTATACTTTGGGAACGACATCTTGGCGAACCAGG GCACAATTGCGCCTGCGCGATTCTGAGGCCCTTTGTCTCCCCGCGTACCTGCCCG Sequence 683

GCGGTGGCGGCCCGGGCCGGTACGCGGGATGGCACATGCAGCGCAAGTAGGGTCTAC
AAGGACGCTACTTCCCCTATCATAGAAGAGCTTATCACCTTTCATGATCACNGCCCTCAT
AATCATTTTCCTTATCTGCTTCCTAGTCCTGTATGCCCTTTTCCTAACACTCACAACAA

CCGCGGTGCCGCCGAGGTACCCCATGCAATATANTGGCTCTACAATCCTCAGCATGTTA
ATCGAAGCCTTGTTGAGCTTCACAAAGGTTCCATTGAAGATTTGACNGAAGGCGAAGAAG
CTGCAACACCTTTCGAACCTTTGGGCTCACTCCATTGATACCTCTGATTCTGATGACAAA
CGCCAATTTGGGTTCTGCAGGTACGAGGACATTTTGCCCCGCGGCTTGTTGGGGGTCTCCT
TTACCCATGTTGACAGATCCGCGTCCACCCGAGGGTATTGGAGGGTATTCTTGCCTGGTG
CGAGCTTTTCCTCAGAGTCCCGCAGAGCGGCCGCTCTAGAACTAG
Sequence 685

GGG

CANNCTTTATNAAAAAAGGNCNTAANGGGCCTNTTATTAAAAAAANGNNTAAAANCCCCAN AAATTCNGGGCCCCNGGGCNGGGCAGGGNTGANANCCCTTAAAGGG

Sequence 687

GCCGAGGTCGCGGGGGCTTACGATGGCNACAAGTATGCGGCTGCTAGTGGTACGATTTG
AAACGTGCTGAAGAGTATCGAAGAGCGGAAAGAACAGACCCGGAATGCCAGGGCCGAGGT
GTTGCGCCAGGCTAAAGCCAATTTTGAAAAAGAAGAAGAAGGCGTAAAGAACTTAAGCGACT
TCGGGGTGAGGATACATGGATGCTACCTGATGTGAAT

Sequence 688

Sequence 689

CTCCCGCGGTGGCGCCCCGGGCAGGTACAAACTGGGCACTGGATAGGTAGTTCCTTT
GGTGGTCAAGGTGGCTCTACCTGTCCTTGAGCTCTCGTGTCACTCGCTTGGTGATCCGTC
CACACATCAGGCCAATCAGGAACAATATACAGATGCTCCCACTGATCACAGAGAGAATGT
AGTTCTTAGATGGAGACGTCATTACTTGCATGGCAAGATCAGAGAAGCCATCTGCTGGGG
CCACCTAGAATGACACAAGGCAATGTGATTCTCTGAGAGAGCACTGGGCTGGTGGCAGTG
CTAGGTCTAACTTATCCCTCTCAGTTCCTAGTTTAATTTATGTCTTTTCTTTTTGGAGAG

GAGGGGCAGGAGAAAAATCAACACAGAGCTACAACTCTTTTTCCTGGATCATAAA ACTATACCCCACGTCTACTGCACCAAAATTAGGAA

Sequence 690

TATTCATTGCTCCATCGATTGGATCCAGTCCTTGTTCAGAAAATTGTTTCAAGGCACTT

AGGCTGCCTGAAAGCCTTGAATCCTTGCTAAATATTCCAGTTGNTTTGAAGGTTGTACCT Sequence 691

GCGGTGGCGGCCGAGGTACTACAGGAAGAAACTAGAGGAAACGGGAATTTCATCCATGTC
CTGTGTATCTGCTGCCAACAGGTCAGAACCGGCCAGTATGTTATTCCCTGCAGGCTGCCT
AGGGTGCTCTCCTCAAACAGATCACCTGAGCCTCCTGCATCTATGAAAGTTATGACACAG
CAACCAGTTACTCAGAGTCTGATGAGAAAAACAGATTTTAGGTTTGGGAAATGGGATTAC
TGTAATTTACACATCCAAATGCAAACTGGAGCTCTGATTTGAATTCTACCCTGGGGGAAG
AACTTTGATGCTAACCCAACAAGGTACCCTGCCCGGGCGGCCGCTCTAGAACTAGGNGG
GATCCCCCCGGGCTGCAAGGAATTTCGATATCAAGCCTTATCGATACCCGTCCACCTCGA
GGGGGGGGCCCCCGGGTACCCCAACTTTT

Sequence 692

Sequence 693

TCCCGCGGTGGCGGCCGGCCGGGCNGGTACCTCAGGGACATTTAAGAGTTGGACGGTGCA AATATATTCCAAAAGGGTGCAACATGACACAGTGTATCCCCCTGCTTCTGTTTTTGTAT

Α

TTTTTGCTACT

Sequence 694

GGTCTCTGTTGGGGCTCCCCTTTCCTGAACTTTGGCCAAAGACAACAGGATATTCTTGGG GGTTTTGTTGTTGTTGGCATNNTTTCTGTGCCTGTTGGTGATTCCAGCACAGN CC

**AGNGANCCGNGTACCTGCCC** 

G

Sequence 695

Sequence 696

GCAAGGGTTGCACGATAAGTTTTGACATGCATGCATGGAGACATGTAGAAATTCTAGTT ACTTACAAGTTTTTGGGGAAGAAGCCTGGACCCAGATGCCAGCTTTAAATAACAGGGGAG TCTAATTACTTCTAAATTCCTCACATAAGGAGTTTTTGCCTCTGGATGGCCTGCTTGAT

Sequence 697

CGCGGTGGCGGCCCGGNCAGGACGCGGNGANGACAGCGNCAGGCGCTTGATTTCCCT GAGTCCCGGTGCCTCANCTGCCCAGNGCCCACGTTCGTAAGAAGGCAACAAGNTCTTCTC CTCTACAGAAGGATTTTGCAAACANTTCGGCAAGNTCCAAATGATTCTGATCGCAAATAC CTGGAAGATTGGGCAAGAAGAATTCAGAAGAAACAAANGTGCCACCGAAGAGGATACA ATCCGGATGATGATTACTCAAGGCAATATGCAGCTCAAGGAGTTAGAAAAAAACACTTGCT TTAGCAAAATCTTAACTATAGCATTATTCTGAAGGGA

Sequence 698

ANCCTCACCGCGGTGGCGGCCGAGGTACGCAGNCCNCCTGTAGGGATCNGTNTTGTTCNT
GACNAGCCCTACGGTAATGCAGCCCGGAGCTTGTTTTCCGTAGCTGGGGACAATCTTCTG
TCCTTGCTGTTCATGTCGTGGAAGAGAGGGGCAGAGTCTTGCTCTGTCACCCAGGATGGA
GTGCAGCGGCGTGATCTCAGCTCATTGCAACCTCCACCTCCTGGGTGCAAGCGATTCTCC
TGCCTCAGCTTCCCAAGTAGCTGGGATTACAGGCGTGCACCACTACATCCAGAGACTGGG
ACTACAGGCATGGATTTTCAGGTTTATAACATGGCAGAGTGAATTCTGGCAACACACTGA
GTGATGCTTGNCAATGGCCACTATCAGGAATTTAAAACAAGATTT

Sequence 699

**GTCACTGG** 

Sequence 700

CGGCCGACTTGATGAGCGGAGAGCCTGCACCGGTGGCACCATCTTGTCCCTGACCTCCGCACCGGAAGCCCCCGCGTACCT

Sequence 701

CCGCGGTGGCGGCCGCCCGGGCAGGTACTGCAAGCAACAGTTACTGCGACGTGAGATCAT
CAAGAACACGTAGAGAAACCCAGCTGTAATCATGCATGGAGATACACCTACATTGCATGA
ATATATGTTAGATTTGCAACCAGAGACAACTGATCTCTACTGTTATGAGCAATTAAATGA
CAGCTCANAGGAGGAGGATGAAATAGATGGTCCAGCTGGACAAGCAGAACCGGACAGAGC
CCATTACAATATTGTAACCTTTTGTTGCAAGTGTGACTCTACGCTTCGGTTGTGCGTACC

Sequence 702

Sequence 703

GGTGGCGGCCGCCGGGCAGGTACAAGACCTTGACACGCCCAAAACACTTCCTGCAGATG
TTGNCGTTGGAAAACTGTCGTCTTACAGAAGCCAGTTGCAAGGACCTTGCTGCTGTCTTG
GTTGTCAGCAAGAAGCTGACACACCTGTGCTTGGCCAAAGAACCCATTTGGGGATACANG
GGGTGAAGTTTCTGTGTGAGGGCTTGAGTTACCCTGATTGTAAACTGCAGACCTTGGTGT
TACAGCAATGCAGCATAACCAAGCTTGGCTGTAGATATCTCTCAGAGGCGCTCCAAGAAG
CCTGCAGCCTCACAAACCTGGACTTGAGTATCAACCAGATAGCTCGTGGGATTGGTGGGA
TTCTCTGTCAGGCATTAAGAAGAAGCTCAAACTGTAACCTAAAACACCTACGGTNTGAAGA
CCTATGAAACTAATTTGGGAAATCAAGAAGCTGTTGGAGGGAAAGTGA
Sequence 704

Sequence 705

CCGCGGTGGCGGCCGAGGTCCGACGCAGCAGGCTCCGAAGATCATACAGACGCCATTACC ACTCTTGGCTCCCAGAAACCTCTGCGCCCCGCGTACCTGCCCG

Sequence 706

CCCTTAGCGTGGTCGCGGCCGAGGTACCCATATCCAAGGCTTATTGCAACTTTTAGTCTT GCCCCTGCTACTTACACAGTCCAGAATCACTTGGGTGAGCATTCCAGTAGGACGGTGGCA TTTTAGGATTCAGAATATTAACCTATAAACCTGTCATTTGATTCTTGATTATTAATGTCT

GGATCGCCTGTGGTAGGGGTGTAATCCCAGGAAGGCATTAAATATATTTGAATTAATGTA
TATTTTGAGAATAAAAGGCTATTTCTAGAAAATATTACACACTTGTCTTATGTTAAATAA
AAATTTGCTATTTATTGAATATCCCTTACCCACCCTTCTTCCCAATGAAGATCTTATGCA
TACCTTCACTGGAAGGTTTAAGATGTGACAATCTTAATAGATCTTTGTGAGACCAGCCAT
TTCTCTGTTTATATTTTGNAACCGCCANAGCAAGGGCCATGCCACCTTTCTCATTGGACC

Sequence 708

CCCTTTCGAGCGGCCGCCCGGGCAGGTACATCCTTTTGCATGCTCAAGAGCCCATTCTTT
TCATCATTCGGAAGCAACAGCGGCAGTCCCCTGCCCAAGTTATCCCACTAGCTGATTGCT
ATATCATTGCTGGAGTGATCTATCAGGCACCAGACTTGGGATCAGTTATAAACTCTAGAG
TGGTAAGTGTCTTCACATTCTTTAAGCACTAAAGAAAACTTTTAATTAGCTACCTTGCTT
CCAGTAATCAAACTAGAGCTCCTCTGCCTTGTGTAAGTTGCTATAAAGTATTGACTATTA
GAATGTCTTGAACTTTGGTTACTGNGAGCCAAAGTCGGTGCTCAAAGTATATTTCATAGT
CTCAATTATATAGTAATTTANGTTCTGAAAAAATAGGTTCTGGCTTTGCATATGTAATATT
TTGTGAGTATTTACTTTGGAAAAGTTTGGTCGACCTAATGGATAAATTTAGAAGTTTATTT
TCCTT

Sequence 709

CCCTTAGCGTGGTCGCGGCCGAGGTACAAGCATGGTCCATACCACTGTTTACTTTTCTAG
AAAGTTGTTAGACTAATTTTTCAACAAAAATTCTTTATTGTCTTGGTAACAAAAGAAGCA
TACTAAAAATTCTCAATAAGGCACAGTGTCTNTAGAAGCTTGAGCATTCAACATAAACTT
CTAATTAACACGAACTTGTGCTCTTATTTCAGCCATTGCTGTGTGGGCCTTGGAGCCAGGA
GAAGATGCAGAGGAATTTTACAATGAATTACTTCCATCAGCTGCAGAAAATTTTCTAGTT
TTGGGGAGACAATTACAAACATNGTTTTA

Sequence 710

CCCTTTCGAGCGGCCGCCCGGGCAGGTACGCGGGCTAATCCCAGTTATGAGGGCTCTGCC CATGACCTCATCACTTCCCAGAGGCCTTACCATCTAATACCAATACATTGGGTTTAGAAT TTCAGCATGAGAATTTGGGGGAGACAGTCAGACTGTAGCGATGATTCTGGAGTATTCATC ATTTAAGAGACACTTAAAAATGATCAGAAAGGAGAGGATGAAGGCTAGAACTAAGACTTT AGCGTTGAACATGGAAAGGAAGTGATGACTGCAGATATCTCCAGTACCTCGGCCGCGACC ACGCTAAGGGCGAATTCCAGCA

Sequence 711

Sequence 712

CCCTTAGCGTGGTCGCGGCCGAGGTACTTACAAAAATTTTTAACATTAGGAGGTAATTAT
AAGTAGATTCTGTGATTAGGACTTCATTCATGTATCTTTTGCTACATAAACCTTTGTTAG
ATTAAATGGAAGACACCTGCTAGGTGATACTTTTTATAAAACATATGAGTAAGTCATATA
TCTTTGTTAAATTTCTGTATGTTCTTTTTTTGTATAAAGATGGAGAAAAGGATGGAGTGA
TACTAAGGACCCTAATAACATCTCTGTTCAAATTAATTACTAAGTGATAGAAGTATTCAT
ATGCCATTAAAGATTTGCCAATTCTATTT

Sequence 713

CCCTTTCGAGCCGCCCGGGCAGGTACTGACACAAGGACTCCAGGCCACACATATCT
TCTTGAAAGCCCTTTTCCTGTTTGAAAAAAAAGATCGTTTGTATTTGATAGAGCAAAAGAA
GGCCACAAAATGAATTGTCTTCTTGTGGGCTGTTTTCAGAACGGCCGGTTTGTGGGCGA
TGCTGACCTTGAAAGACAGAAATTTTCAGATTTGAAACTCAACGGACCCCAGGTAATTCT
TTGGCTCAAGACCTGGGTTGCTTCATTCATATTTTCTTATTTCCCCAGCCTATAAGAGCA
TATTTGTGTCTTGTAAGGTGCCTGG

Sequence 714

CCGGGCAGGTACATATGCACTATTTAGAATATGACATTAATCAACCACTAGAATTAAAAT CAGGTTATAAATCCTCAAAATCACCAGAAGTATAAATTTAAATGAAAAACCCAGACCACA GAACAAAAACAGAAATACCAAAAAATAATCACAAAATATTAAAAACAGTATATAAAACACA GTGACAGAATTAGGACTAAACATATCTGTAAAACAATAAATGTAAGGGTAATCTCACCAA 124

## Table 1

Sequence 715

Sequence 716

Sequence 717

CCCTTAGCGTGGTCGCGGCCGAGGTACTAATCTAAATGCTAGACAGTTCAAGTGTAGCTT
TGGAGACTTACAGATAGCCAGCTAGAGAACTACCAATGATGATATCCATCACGAGGAGTT
TGGTGGCCAGCCTCCAAGATGGTCCTCAATGATCTTTGCATCTTCATATTTCCACCCTGT
GTAGTCCCCTCTCTCAGGGGATTAGGGTTGGTCTGTATGATCACCACATGGCTGCAGTAA
TGGTATGTCACTTCTGAACTTAGGTTATAAAAGACTATGACTCTCATCTTGGGTGTCCAC
TCTCTGTCTCTCTGATCTTACACTCTAGTGGAAGCTGCCATATTGTGAACCTCATGGAAG
GCCCACAGGGTGAAAAACTGAAGCATCTAATCAACAGTTAGCAAGAAACTGAGCCTGNCA
ACAACCATGTGAGTGACCCCGGNAAGATTTTCCAGTCCCAGTCAAACACTTGANATAACC
GGCAACCCTTAAGCTGACAGCTTAACTGCNANCTGATAAAAGACACCCTTGGGNCAAAAC
CATTNGGAACCATTCATACCCCA

Sequence 718

Sequence 720

CCCTTAGCGTGGTCGCGGCCGAGGTACTTGAAGAACATGGTAAAAATATGTTCACAATAA

Sequence 721

Sequence 722

NGCCCTTAGCGTNNTCGCGGCCGAGGTACATGAACCTATTAATAAACCATTCATGCTTCC
CAGTTTGGCAGATGTGAGCAAACTATGTATAGGAATTCCAAAGGTAACTTTTTCCTTTCA
TTACTTTACAGAAATACTGTCAAGTCCAATAGAGAGCACAGACTTGGGAGGCGGATTGGG
TGGGTTTGAATCTCTGCCCACTTTTATTAATCATGTGAGTTGAGTATGTGACTTAA
TCTCTTTTAGCTCAATTTCCCCATCTGTAAAATAGGAATAATAAAAATACTGACTTCAGA
GAGGTTTGTGAGGATCAATTAGACAGTCATGTTAAGTCTGTAAATTGTTTCTGTAATGGG
CAAGATAGCAAATATTTTAGATTTTGTGGACCATGCAGTCTTTATCATAACTGCTTAACT
GCCATTATAGTGAGAAAGCAGCCACAGACAATATGTAAATGAAAAAGTGTGTCTCTGTTC
CAATAAAACTTTATTTTCAAAAACCAGCTGGCTTGNCACATCTGGCCTATGGGCCCATAA
GTTGGCCCATCTCTAATGTAAAGAAAGGACTTTANCCCAAAGCCACAACTTGCATAGTAA
TGCCTTAAAAAAATGGTAACATCTTTACTGGTATTAATAATTACTACTGCATCTATTACC
AGNAGCCAATTGGAGTAATGAATCCATGAATGGTATAATGGTAAAAATACTAACCCTTT
Sequence 723

Sequence 724

CCCTTTTNAGCGGCCGTTNNGGCAGGTACTCCTCAGCTTGTGCTGCCCTTCTCGAATGAC TCGCGTTTCCTGCTTTCATCACTACACCTCCCACCGCTCTCCATCACCTGCTCTGCTCTT ATAAGGATCCAGAGAAATGGAATAATCTTATTGCTGATCTATGTAAACAAGTTGAAGAAT CGTCTGAAAGAAAATACAGTGTGTCTAAACTGGAAAAGTCCTGTAATAGTTTGTTCATGA GCATTTGCACAGTGGAGTTACTGTTCATCATGGGGGGTAC

Sequence 725

ACTCCTGCAGTTCACTGGGTTTCAAACTTAAAAATCAT

Sequence 726

Sequence 727

Sequence 728

Sequence 730

Sequence 731

CCCTTCGAGCGGCCGCCGGGCAGGTACTTTTCTGAAGAATACATCTTCGTTCAATGTGG
TCGTATTCTTAATTTTTTCTATAATATTGCTTGTAATCTTTAGAGTTATGGTTTCATTTT
TTGACTATTAAATTTGAAATTGTTGACATCAGCAGTTGACTCTTCTGTGTAGATCATAAT
TTTTTAATTAAGAAGACACTCTCAAGTGTTGAACTATAATTGTAGAGTAAATTCTAAGTG
GAGGATATCGTAAATTCTTTTTTGTCTTGGTATTGACATGTAAATGTTAACATATGTGAA
TAATTCAGTCCCCGATTGTCACAGGTTCTATGTCTTTACCTCCTTTCAAAATACTTTCTT
TAACAAATACTTTGACAAATTTATTAACCATTTATAAGACAAGACTTACCAAGGTGGTGT
TCGTTTATGAATCTTTAAATGTTTTCCAATACTTAAGATACATCAAAATTATAGGACTTC
TCAATTCCATCCTATTGTTACCAGAATATNAAA

Sequence 732

CAAAGTGCTGGGATTACAGGCGTGAGCCACCACACCCAGCCTATTCCTTTACTTTCTTAA ACTTTCTTTCACTTTACTCTATGGACTCACCCTGAATTCTTTCCTGCTCAAGATCCAAGA ACCCTCTTTTGAGGTCTTGGATCGGGACCCCTTTNCTGTNACACNAACTGTATCCCCCTT GGCAGACATATGAATTTGCACCCCCGCTTGGGTCTTCAATNTCCAGGGGATGAAACAAGG GAGGNAAACCGAGGGGAAAA

Sequence 733

CCCTTAGCGTGGTCGCGGCCGAGGTACAAAACTATGTGAGAACGTATACTACTTCTCGGC CACAACTACTATTTTAGATATTCATAAAATAACCTCTGATTGTGTTTTCACATTGCCCA TTCAGTTCTGTCCCAATCTTATAATTCTGATTAAATGTTCTGGCCTCAAACTAATTTTTA AAAGGCCACTAACTCCAAATCTAGGAACAAAACACTCTGTAAAGACTCTGTAACTTGTAT AAAATTAACTTGAAAAATTCACTCCAATAAAACTATGATTTATGTAGCTCATAAGA GGGTGAATTTTGAATATTTACTCTATGAAAAAAAGCCTAAGCAATTCAATAAAAACTTGAT AACTGCACGTTTAAGTTTGCAGCATCTTGTACCT

Sequence 734

Sequence 735

Sequence 736

CCCTTTCGAGCGGCCGCCCGGGCAGGTACTTGTCTGCTTCAATAAAATTTGTCTTTGATT
TCACTGGTGGAAGGGTGCTTGATCCAGCTTTTGCTTCTCCATGAGGAGGACTCTGTTTTT
CAGTTTCCGCTTTTATTTCCTCTGAGGGGAAAAAAAAGAAGCATACATTANAAAACTGGA
CAGCAGAAAGACTGAGTAATTTCTTAAGTTCTATAAACTCATTTGGAACTTCTACAAAAA
GTTGGAAAGAATGCAAATTTAATAAAAATTAGATGCTAAAATTGTTTCATCTAAATTTTT
TAATTTACACAAATAACATAAAACTATATGAATAGGTACCTCGGCCCGCGACCACGCTAA
GGG

Sequence 737

Sequence 738

NATTTTTTTTTTTTTTTTTTTTTGCTTGAAAACCCTTTATTCGGTTTCTCAGTAACAGT
GATGCATTATAGAAATTCTTGTCTGCTAAACTTCATAGCAAACCGATCCCAGTCCTCACC
TNATTGTGTGGGTAGCCCAGCAGCAGCAGAGAAGATAGGAATTTTCTGCCCCCTAGCAATACTG
TTCATCCCATCAGATGGCCGAAATGCCAGTCTGAATCATTTCCTCTGGGTAGATTCNACA
TTGAGGGTTGATTGGCTGACCTAATGTNTTTTCCAAAAAAGGAAAATTTCAACAAGTTGCC
CGCATTATTCATGAATGANAATTAGATNTCATATCAAATTAAAAGAAANGAAAAAGCACC
AGANGACCAGAACTACATAAAGCATCTCTTTACTACAAAAAA

AAAATGGAATTATTTGGNCAACCATGCTTTCAGATACTTGGAAGAATTGGTCCTAATTNC

TTCTTTATGACCTATTCTGNGTTCCTGGGACTNTACATTAATCTTTNCCCATGGATATTT ACCATTGGAAAGGG

Sequence 739

Sequence 740

Sequence 741

CCCTTTCGAGCGCCGCCCGGCCAGGTACTTCAGGTTAGAGATGACTTCAATATATGTCG CAGACCTCCCAAGGTGAGCATCACACAGCACTTATCATAATCCGAAGCAGCTCCACAGAG GCTAAGATGAAAACAAAAATCTCAGGAAATTTATGTTTATAAAAATGATACTTGCAAAAA AATGAATGGAACCATCTCCATTGCTTATTTAGAGTGTTGACTCACTGAATAAGATTTTAA ATTAGTCAATAGTATTGGATGCCTCTATATCTGCATATCAATAGGCTCATAAACAAGGTT GCTCAAAGAACTGCCCATCAACCACTTGGTTTCATCTTTGGACACCACACTGGTTATCTT NCTTTGGCCTCTGCCATAACGGGTCCAGGCTACGTGCACCAAAGGGAAAAGAATTGGGGT NCTTCTTCCCTNCCCTGGTTTGGTTAGGA

Sequence 742

Sequence 744

Sequence 745

Sequence 746

Sequence 747

CCCTTTCGAGCGGCCGCCCGGGCAGGTACTCTTTTGTTTAGGTATTTCCCTCCTGCTGTG
TCCAGGATTGCTGTGGTGGTGATGAGTGCTGGGAGGTGAAAAATTAAAATAAGCCATT
TACCAGTCAGCATCCCAATTAAATATTTGATGTAACTGTGATCTTTGAGCCAGGCTTATA
TATTCATTTTCAAGCAGAGGAGTTCCCCATTTTAAATAGAGGCATTGTCTGATGTGTTTA
TGGTTAACTGCATCTGGCTTGGGTCTTTCTGTTTTCCTTTTGCTGAATTAGAAGGGG
TTACTCTGAAGAGTCCAGGTCTTACAGTGTGGTT

Sequence 748

Sequence 749

Sequence 750

CCCTTAGCGTGGTCGCGGCCGAGGTACATTTGATTGTGGCATATTCAACTATGATTTTAG
ACAAGATGTGTGTGTGTGTGTGTGTGTGTGTAGACAAAATAAAATTCAGAAAGAGAAAAT
CTATTCTACAATGAAATTCAATCTCTTACTTAGCTATTTTGAAATTGTGTCCCAATACCA
CATTAACAGAGCCAAAATGAAATTTAAAATTATGGTTATACTATTATTCACACTAGGTAG
GGTCAGGTTTTTTTGNCTGAATTAAATGGCTCCTTTACNCTAGCTACTTANGAACCACTT
NCCATACCCTNAAGCTAGAGTAATA

Sequence 751

Sequence 752

Sequence 753

TGACATATTTTCCCATCTTCTTATTCAACCATTTGACTGGTTGTCCAGCCCCAAATTG
TTGGACTTTTTTAAACAATTCACACTGACTGGCAGTCTTCACCTTTAAATNGTTGAGTTC
CATCCCTTTAAAATCATTTAAAAACATGATTTTTAAATTTATCTCCATTACCTTATTTTG
NGTTTACTTTTTTACTTTTATTTATTTCT

Sequence 754

Sequence 755

CCCTTAGCGTGGTCGCGGCCGAGGTACATGTTGGAAGGGTTTTTAAAATGTTTTGAAACT GTGCACAGGCCAAACCCAACTTTCAGGACATGGGTTTTCAACTTCTGGATGGTATGATGG GGTGATAGTAGGGTATAAAAGTATCCTGAGAAGTTGAAAGCAGTGTGTGAATGGGGTGTT CTTTTCTCCCCACAATCCTTTCCCATCTGCTGACAGTAGACTTAGCACCTCACAGATGCT TGGGCCTGGAAATGAAGCCATGAAAATGAAGCCCTCAGCCTTCTTGGAGATCAGAGCCAT GGTCCTCACCCACAGCACATGGG

Sequence 756

Sequence 757

Sequence 758

CCCTTAGCGTGGTCGCGGCCGAGGTACTTGTTTTAAAACAATGTTGGAAATGAGGAAAAT GAGCAATATCAACATTTTATCCTGAGGGACAGGGAGTAGAAAACAAGCCAGAGGCTGCTA GTTACATAGTTCAGTCTTAGGGATGAAGGGATTTATGTCTCTCCCTCAGGTACGCGG GGACTACACTGGTGTCTGACTTTTTTCCTAGAGATTTCTCCCTGAAAAATACAAGGGCTG TTGGTGAGAGCAGACTTGAGGTGATAATAGTTGGCCTCTGGTCTACAAAGATTTCATAAC TCCTTGGAAAGCTTC

Sequence 759

CCCTTTCGAGCGCCCCCGGGCAGGTACTCCGATTGCCTCTCCCATGCTTCTCTGCTTT CCAAAGAAAAACTGACCTTGTATAGATCCTGTCAGCTGATTGCAGTGCTCTTAACTTCT CCATTGTGAGTTGTTCAGTCTGAGGAGTTAGGTATAAACCCAGAGTGGTATTCTCTTTTC TGTTGTGTTTGCTTTCCTTACATATTCAGGAGCTGCTCTTTACCCCCAGAACATCCGTA TATATGTTTTTTCTGTTTCTAGATTTAAAAATATTCCAGAAGCCTGGCCTCAAGATAGA TAATATTTTACTTTT

Sequence 760

Sequence 761

Sequence 762

Sequence 763

CCCTTAGCGTGGTCGCGGCCGAGGTACGCCTAAGGGANGNNNGGAACTCATNAAAGAGAC AAAANGTGCNTTTTTGNTTNNAAGGCATGCTGTGGTGGTTGGGCGCAATAAAATAGTTGG GGCCCCGANTGCCANTGACTTGCTTTNTNGTNGGNAACNAAATGGCCCATCANGTTGGA CNCACCTGNCCANTTCACAAAGACCTTGNCCCCATTCNTGGGAATGNAAGGGAGNGTTAA AAATAAAAAAGTGTTGACCACTCCCTTGGATGGGTTTAGCCAAACCTTGGGNTCCANGCC CCTGGAAAATTGGTTTTAAAAGGGGGGGGNAGNTNGGGATCCAAAACCCTGGGGGGCCAAA ATAAGATACAATCCGTANCTTGTTNGGGAAANTTCAAATTTTAATTGTTCCCCCCAAGNA TTNGAATTANNAAAAAAAACCCCCAAAATTTGGGGGGAAGGNAAAAAAANGT

Sequence 765

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Sequence 766

CCCTTAGCGTGGTCGCGGCCGAGGTACAGAAGCAATGTTTTTTGAAAGTTTTCTATCTGT
GGTTTGTTGAATCCACAGATGCAGAACTCATGGAAACAGTGCCCACTGTATGTCACAATT
TCAGAAAATCAGTATTTCATACAATCAGCTAATAGCCTAATTTGTTGAGCACAGAAAAAT
ACACTGAACCAATTCTGATTATTGCAGAGAAAATGATTGGGCAGGATATTGGGAAATAGAA
TGAAGGGCGGAAANAATTTCACATGGATTCAGTATACTCTCCGTCAGGAATTTTGTTCCC
TTGATCTTTTTGTGGTTTAATGCCTTAATTTATTGGGGCCCCTCTCATANGTTTGGGGG
Sequence 767

Sequence 768

CCCTTTCGAGCGGCCGCCCGGGCAGGTACTTATTTTTTTACTAAGGTTTTGTTTTGGAGA CTTGTTTGAAATAAAGTGATCCTCATTCAGGATTTAGAAACAAAAGTTATACTCCACATG CTAGGGATTAGGAAGGCTAATGTGAACTGATCAAAAGTATGAATTATGGAATGCCTTTAG AATAATCAACTTTTAGGTAATTTGATACTGCTATAATTTCAAGCTTAGAGAAAAGTTGTA AGAATGGCATAAGGAACTCCTATATATCC, TTATCTAGATTCACTAAATGTTCATTTTGT GCCATTTGTGTTATTCTTTGTCTCATCCTAGCCCAGTCAGCCTAACACCACCCAGGGGAT AAACCAGTAGTCTGATA

#### Sequence 770

GATATCTGCAGAATTCGCCCTTTCGAGCGGCCCGCCCGGGCAGGTACCTCTCATTTGTCA
CTTTTCAACACTTCCTGGCAGGCAGCAGCATAACTGGTCCTGCTGGGTGATCCAGACCA
CACTCTGCAACTCTTCTTCTGAGCCAGGCTCCCCTACTGTCTTTTCATTTATGTCAAGG
CAGGGGAAGACCTCAAAGGGCTCTTGCATCCCAGTCTCACTTCCCAAGAGAGGCACGAGG
CCCTCCAGGATGTGGGGACAGGAACTTTGGGGCAAGCCCGGGGCTGTCCAGAAGATCACC
AGGAGGGCTAAATAGTAGAAAGGAAAAGTCTTATTGGTGATATGTTTGCAAACTGGGAAA
AAGATAGCCTCCAGTGTGGAGCAAAGATGCTCCTTCTTCAAAGAGGGCAAGGGCAGCTTG
GATTTTGTGCCTTACANGGTCNGTATTATATAATAGAGTCATGCATATTCANTAGGTTTG
GGGGAAAAGCTATATATATTTATGAAGGGGAGCCAACTACATGGGCAATGGATAAACATA
CATGTAACACATCCATGTTCACTTTAGGGGCA

# Sequence 771

GGATATCTGCAGAATTCGCCCTTAGCGTGGTCGCGGCCGAGGTACAAATAAAGTATTCCA AGGGNGGNAGAATNGAAAANGANGNCTNNCANCTTGNTNNCNTTTGGGAAATTGGGATAT CCTTTGGGGAAATGTÁGTAATCAGTATATTCTGGGNAAAACATTAGTTAGAAGAATTGAA NTAAATAAAATTTCCATTGAATTTGGAATATGTTGTCCATTCTCCCTGTAAACTAATGCT ATCAANGATAAAGTANGAAATACCACATTTCAGNAAACAAGCTTGGAAGTAGNACAAGGT CCTTCATTAGNGCCNTAGCCTTGGNAAACCCTTAATAANCCTATNTAAATAAAATTGAAA ANTTTTTAAATTTATNACTCCTGG

#### Sequence 772

TGCAGAATTCGCCCTTAGCGTGGTCGCGGCCGAGGTACCACCAATAATGAGGCCCACATT
GTGTATGCTAAAAAAAAAGTGNTTTTNNTTNTTCCTTGGGCCTACAAGAACATGTTTCTG
TCCGCTAAGGAGAAANTNAAGAAAAACAATGGCCCCCTTNCCTTCCCNATNAANCCCAAA
ANCCTTAAAACNTCACAGGGGANGTTGNAATTTTAAGGAANTCCACCCCTTTNTNGGGGN
NNCANTTTTTTTCCCCCCCCAAANAACCCAACNCCCCATTTACCCTCCTTNGTTAAGAAA
TTTTCCNTTGGAATTNAATNGCCNACCTTCCTTTTAAANAAGGNANAAGCCCTNNACCNA
AGGCTTTCTTTTTCCCCCCCAATTTNCCCCCCTTNATTCNTTGGAAAAAAANGGCCCNAAC
GGGGGAAACCCCCCACCCTTTGGGCCNTTTTTTTGGNGGGTTCCCAAGGGGGAAAAAAACC
AAGGGGCCNATTTANCCNAAAACCCAATTCCCANGGANATTGGTTTGGNAATTTTAATTA
AAAAAATTNGGGGGCCCCNACCCATAATTTTCTTTAAAAAAAAANGGTAAAA
Sequence 773

CCCTTAGCGTGGTCGCGGCCGAGGTACTATCATCCCCCAAGGCCTTTTACAGTCTGAAAT
ATCAAAATTGAAAGCAAAAATAGGATGACCAAAGGACTACTATTTNACTCTCTTTTCAGN
AACNTCNTACAATATGTATGAAAACCTAAAATATCCACTNTATGGGATCATCANNGGGGG
GAANNTAAANTGTTGCCCNTGTTTTNGNAAANGGGGCATTCANGATGTATTTGGGATGTN
CNCANGGNCCTGGGGCANTTTTATNTCAAGGATGNAAGGGGNTNNCATTAACCTGAACCA
AGTGGANTGACANGNGTCTTCNCNTTATAAATACCAANGGGGCCGNGTTNTGGCNAACCC
CANGCCACCCCAATTGGAACCTTATGGGGGGGCCTTNGGCCNTTTTTTANAAAANAACCA
AAAAATTTTTTTCTTAAAGGGGGAACCTTTTACCCGGNCCTTCCTTNTTTTGGGGGG

Sequence 774

CCCTTTCGAGCGGCCGNCCGGGCAGGTACATATACATTATGTAATTAAAAAGCGTGCATG TGTATGTATTAAAAATAATGGTATATAAAACAAAATTACAATTATATACCAAATAAAAAC CACNCTAAACGCCANNAGGGCATGCTTGTTTATTCCCACCATATTAGNTAATAACCCAAA TAGATAATTAAANTGGAATTGGGTG

Sequence 775

Sequence 776

Sequence 777

CCCTTAGCGTGGTCGCGGCCGAGGTACTGCAAGCCAAATGCAATGAACAAACCAAGGTTA
TTGATAATTTTACATCACAGCTCAAGGCTACTGAAGAAAAGCTCTTTGGATCTTGNATGC
ACTTCGGGAAAGCCAAGTTTTCCGTAAGGGTAAAATCGGNAAANTGAAAGNAAAACCTTT
AAGACCAGNCAGCTTTGAAGGTCAGCCTTGAGTAANACAGNAATTTAATACCAATTTTAA
GAAGGAATTTGGAANAAANGAAAATGGCCTTGAAANAGGTTAGGCCAAAGGGGCCTTAGG
GTTAAGTTCNCTTTAACCCCAAGGAAAGGAAGGCCTTNCCCATGGGGGGGGAAGNAAAG
NANGNCCTTNAAAAAGGCCCTTTTAACCCTTAAAACCCCTTTTTTCAAGGGGGAAAAAAA
AATTNTTTGGAAAGGTTNGNAAAGGGTCCCANGGTTTCCANAAGGTTNGGAAAAAAGTAA
AGGAACCTTTTTTTGGGGGGATAAAAAAAAAGGGAAACCCTTTCCCAAGTANTTTTTTTTGGG
AAAAAGG

Sequence 778

Sequence 779

CCCTTAGCGTGGTCGCGGCCGAGGTACTACGAAGCTGCAGATCATTACGCTGATATGAAT
GACTGCTTGAAAGAACAATGACTCTGGCACAGCCACTGCTTTTCACCCAGGAAAGCAGTT
TTTCACAGAATGGCTTTGATTTATACTTTGCACACCATTGAGAGAATAAAAAGAAAATCT
AAAAGTTAGTCTTAGAGCATACAAACATTCTATATACTATTTCATCAACTTTATGTGATA
ATGATATATAATTTATATATACTGAAATTATTTTCAGGATCCACTTACTGTGCTTAAACC
CGAAAGTGAATGATTAAAGAGGCAATGGAATTATCTAATGTATCTTTTATAAATTAAAATTAAGAA
ATCAA

Sequence 780

CCTTTCGAGCGGCCGCCCGGGCAGGTACAGACAGTGTGATGATGATGCTGCTGGTTGT
AAATTTCATCGTGTGTGTCTAATTTTTTTTCCTGTATGAATGGGGTAAAAACAAAACANN
AACTTTTTTTTAGGAAGATTGTAATTTTGCNTGTCATGTTTTTNGTAGGNAATGAGGGGN
ACTCGTTTGNAGTCTTCACCTAACNCATCCCTGNGNAGTTTNTGAAGTTTTGGAAAGNCC
ATTGAAANNATTGTGTTGCCCCCCCAATGNCCCTTGGACCNGCCTTNACAGTCCGNCNCTT
NNGGATTCTTGCAACCGTTGTC

Sequence 781

Sequence 782

Sequence 783

CCCTTAGCGTGGTCGCGGCCGAGGTACTCTTCACTGTCTTTGCCATGAAACTTTATAACA
TGGCTCTCCAGGTGTTGAATCTGGTGCCCTGTCACCCTGTGCTCAGGGAACACATGGCGG
CAATCAGCATGTGAGGCGCAGAGGGGGGGCAAGCTCCCCTTGTGATATTTGAGGTATCAG
CTGACTCAAGTCTCTCCCTTCTCTCTTATTCTCATGCTACCTNTCCCAACCATTGTC
TTAACTTCCCTGGCCAGGATGCCTGCCATATTAAATGGAGAGGGGGGCAGTTTCTAAATGG
CTTGACTTTGGTTGAAGTCTCAACTCAGGAAGCTCTGAAATTAATCCACCC

Sequence 784

CCCTTTCGAGCGGCCGCCCGGGCAGGTACTACTCGATTGTCAACGTCAAGGAGTCGCAGG TCGCCTGGTTCTAGGAATAATGGGGGAAGTATGTAGGAAGTTGAAGATTAGTCCGCCGTA TTTCGGTGTACCCCTGGGAGGTGCCAGTCATTGAATAAGATAAGGCTGTGCCTACAGGACT TCTCTTTAGTCANGGCATGCTTTATTAGTGAGGAGAAAACAATTCCTTAGAAGTCTTAAA TAT

Sequence 785

CCCTTAGCGTGGTCGCGGCCGAGGTACAAGAGGATATGTGTGCATTACATGCAACCACTA
CACCATTTAATATCTGGGGTGTGAGTATCCGTGGGTTTTTTGGNATCCGTGGGGGTCCTGG
AACCAATTTCTCCTGGATACTGAGGGATGACTGGATTACTGTGTGTTTGTGTGCTTGTTT
TTAAGCTTCAAAAGATTATGTGATCTAGGAGTTGTTAGATTTTATTATTGTCTTAAAAG
ATAAGCTTANATGTTGTTACTTTTTTTGGAGTTTTTAGTTTACAGTGATTTCATGAATCGG
GCAGCTTCANACCACAGGAGACATNAAGCAGGTTTNAATTTTCAANGAAAGGCNTTTACA
AGGCAAAAATATTTTGATTTGGTTTAGA

Sequence 786

Sequence 787

Sequence 788

CCCTTTGAGCGGCCGCCGGGCAGGTACGCGGGATTCCTGGTTAAGCAGGCATTGCTTTG CCCTGGAGCAGCTATTTTAAGCCATCTCANATTCTGTCTAAAGGGGTTTTTTTTGGGAAGA CGTTTTCTTTATCGCCCTGAGAAAGGATCTACCCCCAGAGGGAGNAATCTGTAGNACAT TCTTTGCCTACTTNTTACTTTTATTTAGGCTNTTCTTCCCTNCAATTTCAATTTTCCTGT ATTACCACCCTTTTTTTCCCCTTTTTTTTGGGGGGGGAAGA

Sequence 790

Sequence 791

GATATCTGCAGAAATTCGCCCTTAGCGTGGTCGCGGCCGAGGTACTAATTCTTTTCCTCT
TTCCTAGACCGATTCTAGTTTGTTGCCTTCCCTTTCCTCGGAAACCCCAAGTTTGTGGAT
GCTGCAGACACTCTGTGCCCCCCTGCATGCTGGGTGCCTGGCCAGCTGCCAGGGCATAAA
GACAGAGACGATGTGGCCTTTGTCCTTAAGAATGAGGTTTGAAAGCCTCAGTTCTTCCAT
GTTAGGTGATTNCTTGCAGCTCTTGGTATCTGCAGAATTAGTGTGAATGCTTAAAAAATA
TTAACAGCTTTATATCATCAAAGTTTTAACAGTACCTGCCCGGGGCGGNCCGCTCGAAAG

Sequence 792

Sequence 793

Sequence 794

Sequence 795

Sequence 796

CCCTTAGCGTGGTCGCGGCCGAGGTACACTATCTGACCTAATCCTCAACACAAACTAAGG CAGGAGACACAGGGCTGCAAGGACATTTGCTGCCATCCAATTTGTGCCAGCCTGTTTTAT CAATCTGAACCTATATTATTTTTAAGACCTCACGGCATCACTGAAAGATGAGTATTATTA GTTGGAATTTTAGGGATGAGAAAACTGACCCTCAGGGAGAATAACTGACTTGCCCCGGCT CCAACAGTAAGTGGCCCTGCTGGGATTTGAACCCAGGTGTGTCTGACCCCGAAGCCTGAT CTGACCTCTGACAGTCGTGATAAAAATAAT

Sequence 797

Sequence 798

Sequence 799

Sequence 800

GATGGATATCTGCANAATTCGCCCTTAGCGTGGTCGCGGCCGAGGTACTGATTATTCTCC
TGCTTAGGGAGAAGCGGAAGAAGGCCCTTGGAACTGTGAGTTTTGCATTCCAACTTGCTA
ATTCAACATAGATCCTAATTCCTTAAATGCTTGTAATTAGAAATTCTCGTGAACTGTATT
GGTTTTTGTCAAGCAATCTGTTTGGGGAACTTGAGCAACTGGGGCACTGCTGGCTAGGGT
GAAGTTTATTTAATTTGGTTTTATGACATTCTTCATCTTGGAAATGGGGTTTTCAAATAT
TGCTTTCCCAAGCATCATTACTTATTTGCTGGTTTTTA

Sequence 802

CCCTTTGAGCGGCCCCGGGCAGGTACGATAGGCATGCAATTAAAGAAGACCTGCCTCAA ACATTTCTGTGTGACCTGAGGCANGTCCTTTTATAGCTATAAACTAGGGACAATATTTG CTGTCATTTTTTCTACAAATGTCACAAAGAACAAATTTGAGCCTGTCGCTGTGAAAGAAC TTAGCAAATGAAAGCATCCTAGGGAGTGTTTTAGATATCGATATTTTTATCCAATTAACT TTTCAAAATGAGTTTATTTGCTCACTGAAACTGAAGTACCTCNGGCGGGACCACNCTAAG

Sequence 803

CCCTTTCGAGCGGCCGCCCGGGCAGGTACGCGGGGGGTTCAGCTGTCTCTTACTTTTAAC CAGTGAAATTGACCTGCCGTGAAGAGGCGGGCATGACACAGCAAGACNAGAAGACCCTA TGGAGCTTTAATTTATTAATGCAAACAGTACGCTTGGGAGTCCTCAGCAGGGGGGATCATT CACAGTGAGGACAGACACAGGTGAACCTATGGGTCGTGGAACAAAAGTTATCCTACACCT GAAAGAAGACCANACTGAGTNCCTNGGCCGNGACCACGCTAAGGGCGAATTCCATCACAC TTGGCGGC

Sequence 804

CCCTTAGCGTGGTCGCGGCCCGAGGTACCTTGCACAGTGCCTTTTAAATTCATTTTGCTG GACAGTTGGCAGGCTCTTTCACTTGAGAGGCTTATATCTTAACGATTTAGAATGGAGAGT TTGGCTCAAGCTCCCTGTGTGTGGTCTGTGCTTTCTATACTTTTATTCTTGGTATTCCAG AGTCTGGAGGCTTCTCTTTTTAAAAATTGCTAGGCTCCTGCCAAATGTTATAATTTGGGG ATGTGAGTTCACTAAGAAATCAACTGACAAGAGGCAGATTAATAGGAGAAATGACATCGA AATTTATTAGCATGCAGGGGGAAAAAATTGATTACCAAATATCCCAGTAGGGTAGAGATG

Sequence 805

CCCTTCGAGCGGCCGCCCGGGCAGGTCCGGGCAGGTACTATTACTAGGTTCATTGTTTCC
AGAGGGGTGAAACGGGGCTTTGAGAGAGGTTAAATAACTTGCCCAGGGTCACACAGCTATT
AAGTGGTAAAGCTGGGATTTACATGAGCCCAGACAAAGAACCCAAGAAGCTAAGCTATTC
TCTTGTAATACCTCCAACATAGGAGGCAAGAAGTGAGGTATTATACAGGTTGAGGAGATA
AAGGGGAGAGAGGCCTGCAGTGCTAACAGGAGGAGCTGGGATTCATCCTGGCTTGTTCTG
ATAGGTCAGTTAGTCTTAGAGATACCCATGAGGTCACCTACTCAAAATGGGGCTCAGAGT
AGCCTTGTCCCATTCTTGTCCAGTGGGCGCAGCTACAGTCTTCCTGGCCTGGAGTGACTG
GAGGCTGTCCCCACGTCCCACTTCAGTGAGGCATTCATGTGCACCCAACACACTTTCTAG
CTTTATTTGCCTGGAGGGGAAGATTCTCCAGAACCTTGTTAAGATGCACAGTGTGGTCCT
CGGACTGGCAGTGGCCTCGGCAGTCCCTGGG

Sequence 806

CCCTTAGCGTGGTCGCGGCCGAGGTACACATATATACACACATATATAGATATATACACC
CACATATATATTTGCTGACATTTTAATGTGAAGTTTTAGTCTGGGATATAAAATGGAATG
TATGACATCCTCAAATGTCTGAATACTGTTCACTCCTATGTTTTACATTTAATTTTCCAA
AGCAAAACATTTCAGTTGAGGATTTATTAGAAAATAAATCATTTAGCCATATCTAG
AAACCAGAATAAACAATGCCATAAAGCCTATAGGAAAATGAGGTCAGATTCATAAATAT
TCATGTGTTTACTTTCAGTACAGGGAGGAATTTGAAGTAGAAACCGACCTGGATTA
CTCCGGTCTGAACTCAGATCACGTAGGGACTTTAATCGTTGAACAAACGAACCTTAATA
GCGGCTGCACCATCGGGATGTCCTGATCCAACATCGAGGGTCGTAAACCCTATTGGT

CCCTTTCGAGCGGCCGCCCGGGCAAATTCCCATGATGTCAGACCACTGGAGTTTCCAGGGGCAACACCCCATAACCGTCCCGCTGCAGAAGAGCATCANANGTTCAGAAGAATGCAAAGGATCTCAGTGGGAACGCGGACAGGAGAGCCCCAAACCAACACATGCTAGGCCTCTCTAGGCCCTTTCAGGCTAGATCTTGACGAGAAGAAGAAGAACTTTCTGAGGTTGGTGCAACTGAGGAAACGAAAGTTTCGGCCTCTGCTGTCAGATCTATGAAAGGAAAGAACTGTGAACTTGTCCCCTTTTGTTTTCTTTGACTTAAAACAAAAGAAAATCACTGGAACAAAGTCTTAAAGTAATAACAGAAATGTCAGAAAAGTTGAACATCTTATGGGCACATGCGGTGAGTTACGCTAACTTATAGCATCCACTGAGATTAGCCCGCATAGGATTCTTCCATGTTAGAGCTAAAAGGA

Sequence 809

AACCTACCGCTGCAAAATAGATTAATATTCACATGGGAAAAATCCTGGNCAAGGGGAANT TTCNNCATTAAATTNTTTNCAGGGGAGTCCGGTTGGCCANCCAGAANTAAGGTNCTGGGT TNGGGGGAATGGCTTAAAAGCCCTTGGGAAAAACAAATTGGCCAAAAANGGGAGTTACCT TTTAATTGAANAANTTTTTTTTTACCCTNAAAAANGGGATAAAATGNACTTGNCCNAAAA

Sequence 810

CCCTTAGCGGCCGCCGGGCAGGTACTCCATTTCTTTTTATTCATATTATTTCACCAAAT
AATATTCCACTGTGTAGATCTATCACATTTCGTTTAGCAGTTTATCAGCTGGTGGACAAT
TTGGCTGTTTCCATTTTTTGGCTGTTATGAATAATGCTGCTATGAGTCATAGAAACCATT
CCTCTTACTCAAGAAACAGGTTCTCCAGAAACTAAGCTAAACTTGTTTGAAATGTAAATT
CTCAGGTATTCTCAGTATAGACCTATAGATTCACTTAGCTGGTGGGGTCCACCCAACTTC
TTTTAACAAGTCCTCCAGTGGATTCTGATGCAATGCTAACATTTGTGAACACTGTCAAAA
TCAAAATGGAGTCACTTGTGTTTTAAAAATCCTGACAAATAAAGCCAGGGACAGCTATGAA
GAGAGGGTTCTCATGCATCAATGCCTGATTAACAAAAACTATCCCAAATGACTCTGCAAA
AACCC

Sequence 81

Sequence 812
CCCTTAGCGTGGTCGCCGGCCGAGGTACCTAAGAGTTATTAATACTATTTCAGTAAAAAA
AAAAATTTAATAAAACCCTGTGTGATCCCATTGTAACAGAAAGGCTGATGTTTTCTGTTGT
GAAATACAAATGCAAGGAAAAAATCATTTCTTTGTTTCAAAGGATGCATTTCTTCCATAA
AGAATAATTTGTATTTATTTTTAAGGGTTTATTTTAACTTATACATCANCCTATNTAAAA
TACATTTCAAAATGATCTGTGCTCTTTAAATTACCAAAAGCAA

Sequence 813

CCCTTGAGCGGCCGCCCGGGCAGGTACATGTGCATAAGAGGGAATGCTTCCCTACATTAC
TCCAGAATACAAAGCTTCTTTCTGCCTTTCTCATCCACATAATGGAAGACACTTCTTGGG
TGAAATACTCCACANTTATTTCAGTTCTCACTGGTGAGTCTGAATATAAGCTCTATGAGA
GCAGGGACCTTGTCAGTCTTATTCACAATATCCCCAGCCTCTAGAACAAGGCTGGCACAT
AGTAGATGCACAAAAGGTGTTTGCTGAATGAATGGATGACTGAGTCTGTGTGGGGTAATG
ATAGGGCTAAGGATGGGACTCTAAACTCAGGTTTCCTCTGTGGGTTTCACAGTTTACTGG
TCTTAAGAGGAGAGTTTCCTAAACTTGCCTTATGATAAAAACCACCTTCAGCATTTGNTA
AAAATTACCCATTCCTGTAGATTCTGAGTCAGTGAGCTGAAGTGGAGCTGATGAATCCT
Sequence 814

Sequence 815

CCCTTTCGAGCGGCCGCCCGGGCAGGTACAAGTATTATGTATCCATAAAAATTAAAAAAT CTTTAAAAATGCATATGGGGGTCAGTAGGTAAAAGAAAAGAAAAGAGAACCAAGAGAGCTGCAGC CGGGGAGCACAGCTTGCTTTAAACATGAGATCCAGCTCAGTGATCATGCGGGGGAAAAGG CCCGGCATTGCTGGAACTCCTAATATTTAAAAAGATGATGGAAACTTGAAATTTTATATT TAATCTTCTCATTTTTAAGTGTTGGCAATGTATTGAAGACTTTGAAGCCTCTCTGCTGGT CAAACAAGATGTATCTGTAGGCTGGATTTAGTCCACAG

Sequence 816

TGTTCTAACATGATTATATTCATGGTGTTACATAGGCCTCAATTTTTTCACAGAAAGATT
TTTGGAACAGGACTGTGAAGTGAGGCTTTTTAAAAAAATTATTTTATAAGCAGAGAACACA
GCCTGATAACTTAGTCAAGGATATACTGTCTGTCTCACTACTTTGGACTTATATGGCTTC
AGATTAAGTCATCCAAGAAACATACAT

Sequence 817

Sequence 818

Sequence 819

Sequence 820

Sequence 821

Sequence 822

CCCTTGAGCGGCCGCCCGGGCAGGTACAGAGCATCTTAAGGTTGGAAGGACTCTTAGAGA CCATAGTCCAGCCTCCCACTTGATACTGAAACACGTTTGTGAATTCATGGCCGATGTCTA ACTTCCCTCACCACCTTTCCGATATGGACAGTTCTCATGCCCAGAAGCAAAACCTTCTTT ATTGTGCCTGTCCTCCCTTGACTGTCATGCATATAATCAGCATCTTTCCCACTAAGTGAA GGGCCCAGACTCGAGCACAGGAGCACACCCCTTAAACTCACGAGGGGCTGCATTCAC ACCATCAGCAGGAGAGATTACACTTGTGTCATTT

Sequence 823

CCCTTAGCGGCCGCCCGGGCAGGTACCAAGACTTTAGAGGGCAAAGAACAGAGGATTCTT GAGAAAGGGGACTTGAAGGTGAAGAGATAAAGGCTGGTGCTTCCAGGAGCGTGGGTCTCC TACGTTTGTGTTCCTGGGAAGAATCTTGGACTCAGGCGTGGGCAGCTGGATGCCTGGGTT CCTTAGGCTTCCTCCAGGCAATGTAGTTGCCTCTTTCTCCCCGCGTACATAGTAAGTG

TATGATAGATGTTTGATATGTAAATTACAAATATAAATTATCACCCCCATTTCCATTTAT
TTTCTTGATATATCAAAATGTGTTG

Sequence 824

Sequence 825

Sequence 826

CCCTTAGCGTGGTCGCGGCCGAGGTACTCAACAAGCAGCTGACTTATGTTTTATTGGACA
TTGTGATACAGGAACTGTTTCCAGAGCTCAATAAGGTACGCGGGAAAGTCAACTCAGTTA
CCTCTGTTTGGTGTGTGTATCACTTGCAGATGCTGTCTACCACCTTTTCAGTGACATCCT
AGAAGCTTCTCTATTACCACAGNAACTGGCTAACTANANATGATCTTTCCCTAATTTTCA
TGAGCATCTTTTTTCTGATATAAACCAGGGAGGGAAAAAAACAAAGTTCCTTCACTTTGA
AGGGAATATTC

Sequence 827

Sequence 828

Sequence 829

Sequence 830

TGAAGCTTTTTGGATTATGAGTATGCTGACTTTTCACGATTGGCTGGTGCATGTTTAGAC TTAAATGTCATATCCTTCATGTCTCAAAGCCAAAATAGTAACATCTCATCTCAGAACAGA GCTGTGACCACATGCCAATATATGTGTCACAAAGTCTACATATGTTACATTCCTTGGAAG TCTCCTTAAATGTTTCACA

Sequence 831

Sequence 832

Sequence 833

Sequence 836

Sequence 835

CAATAATTAATTTAATTTCAATAGCGATCCCCACCATTTATGTCCTAGGCATCTACACAA TTGGTCTCTGAGCGAAAACACAGCCTTATCTGCAATAAAAGCCTCTGCTTTGCTTTGGCA TGTTTTACAATCCCGCGCA

Sequence 837

Sequence 838

Sequence 839

Sequence 840

Sequence 841

Sequence 842

CCCTTAGCGTGGTCGCGGCCGAGGTACAGTGGCGTGATCATAGCTCACTGCAACCTCCACCTCACAGGGTCCAAGTGGTCCAAGTGATCCTCCACCACAGGTTCCAAATAGCTGGGACCACAGGTGCAAGCACCACACCTTATTAATGTAGATTTCCTTTGTAGATGTAGATTTCTTTTACAAAGTGACAGCTTTCAGAGCTAGTCCTATGTCTGCAGTTTCTCAGAATAACCAGCTCAAAATATGCCAGAGAAGTATATTTTGGGGTGGCATATTCTAGTCTCCTCCAAGTCATATTTTGGGGTGGTGTCTCATCTCTCAAGTCATATTTTTGAGTCCCACTGTTCATTCTCATAGCCCCAACAAGATAGGTTTCATTTTTGAAAATTGCTCTTTCAGTCCCACTGTTCATTCTCATAGCCCACCTGTTGATTTCCTAGGCATCTTCTTGCTCANGCTAGTTTAGATGTTTGGTGGGACTAGAAAATGCAANGGAGGGAGAAAAAGGAAAAGGCTTGGTGATTTCAAAGATTTTTAA

Sequence 843

Sequence 844

GAGCGCCCCGGGCAGGTACAAGAGAACGGACGGCACTTACTGAGCCCATCGCAAATG
TCAGGCTCTGTGCTATACTTACATTATCCCATAATCTTCAAGACCCCTCAAGACCCCACA
AAGTAACACAAAGCAGGAAACTAACTCANATTTACTTGCCAAAGGTCACACAGTTAATAC
ATGGTGGAATCAGGACTCAAAATCANGCCTGTGTGACTCCAAAGTCCAGTGCTCTCCCA
CTTTACCAGGTAACCTTCATAATACCGGATTGGAAATCAAACCTGTCACTTTACTTTTCT
ATGTCCCTGAGTGANTCACAACTTTTTCTTCANCCAGCTTTTTTCATT

CCCTTAGCGTGGTCGCGGCCGAGGTACCAGGAAATTGGTTTGATTGCCATAGGCTAACCT
TGGACCAATCACTGTGGCCAAATACATGAGGTATCCTTATTGGCTCCTTCTACTAGCAAC
AGATGGTTTAGAGAACAGTGTATCACAGAGAAATGGGGATCACTATTATAGGCAGATTGA
ATAATAAATGTTCACTCTACTACTCAATAAATATTTGTTGAACAAATCAAAGCTGATCCC
TTTTTTCAAAATTTTTAATGTGACTCTTAGGGGATGGTGGATCCAGGAGAGAAACCAGTTGATGT
GCCACACTGAAAAGAGAATTTGGTGAGGAAGCTCTCAACTCCTTACAGAAAACCAGTGCT
GAGAAGAGAGAAAATAGAGGAAAAGTTGCACAAACTCTTCAGCCAAGACCACCTAGTGATA
TATAAGGGATATGTT

Sequence 846

CCCTTAGCGTGGTCGCGGCCGAGGTCGGCCGAGGTACAAAAGTTCTGAAATAACACTATA GGCTTAAGGAATAAGGGACCAGAAGTAGCCTGGTAGCCAGTGTATTTCTGGCTTTATACA TTCCTTAGGAAAAAAAAACTTTATAGATGTATTTAAGTAGAATTAAGGTTTACACAAATG ATTTTTGAGAGAGAGAGTCCCTAGGACCTAAACATTCGTTCTACGGAGATAGGGTCAAC ACGCAGATATTTATTTAGCAGCATGGTCTGCAGAAGTAGGAGGAGGTGACCAGATGTGAT GGATTATGCCTGTAATTCCAC

Sequence 850

Sequence 851

Sequence 852

Sequence 853

GGNCGGGCCGAGGTACGCACATACATACACACTAACGCTCAGCATAAACTTTCCATTACA CTTAGACAATGACTTGTGGAGGAAAAACAAGGATAAACAAGAGTCTCAAGAACTTAAGAA AAACATCAGAGTTGATTATTTAGCACTTTCTCAGGATTCTAAGGCAATANGCCTAANTTC AAAACGTGAAATTGTTCTCTATTTCCCATTAGTCATTAAATGAGATAAATGACAAGCTAT TGCTGCTTCTCCATTCTGTTTTCAAAGAACATTACAAAAATAAACCAGTGNGTTCTCTAA CAGTTCTAAAAACAGNTTG

Sequence 854

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Sequence 855

CCTTAGCGTGGTCGCGGCCGAGGTACCTGGGACTACCCACCACCATGCCCGGCTCATTT
TTGTATTTTAGTAGAGACAGGGTTTCACCATGTTGGCCAGGCTAGTCTCAAACTCCTGA
CCTCAAGTGATCCACCTGCCTTGGCCTTCCAAAGTGCTGGGATTATAGGTATGAGCCACC
GCACCCAGCCTTCAATTTTTTTTTAATTCTGATAGAGCACCATCTACTACATGCTTAATA
TTATCCATAAACAGACATGTCTGAGCACAGAAGATCATGTTAATGAAAGATTATTGAAAG
GTACCTGCCCGGGCGGCCGCTCGAAAG

Sequence 856

CCCTTCGAGCGGCCGCCCGGGCAGGTACAGAAAAAAGCATAATGAATACAACAACTAGCA TCAAACTCAGTGTATATAAGAATGGCTAAGTGACCATTAGTCATGTGAAAAGCTTAACAA

Sequence 857

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Sequence 858

Sequence 859

CCCTTTCGAGCGGCCGCCCGGGCAGGTACTGGCTGACTTGAGGTGGTTTAAGTTGGCAG CTACATCGAAGGACTTCTGAAAAGCTCAAGTGACAGTTACACCTTTGCACTCTCCACATT CAGCTGGCCTTTTCCCTCAAAACATGGATAATCTTCAAACCTCCCTGAACAGGTGGAAAT GCGTCTTTCCTCTAAGCCAAGTTCTCAGTCCACATTAGTCCATACTTGGCTACAGAATTG ACGTTTGTGGCCACAATCCTACTAGAAATGACCTTTGGGTAATATCCTTATCTTGTTGAT CTAGTTAGGGTCAAGTAAA

Sequence 860

CCCTTAGCGTGGTCGCGGCCGAGGTACTTTATGCAGAAGGAAAGCAATTGCAGATGGAAA
AAGCTGAGATGCTATAAGGAATTACGGATTTTATAAAGAGATCACCATGTGGGTGAATGT
AAATATAGATGAACAAATGAAGCATAAACAAAATTTTAATATCTTACAGGCTAAAATATTT
AGAAATGAAAGACAACAATAGCATATAAGTTAAGAAAGGGGGGTAAAAAGAATCAAGAGCA
TTCTAAGGTCCTTATATTACCTGGAAGGAGGAGTAAAGATAATGACTATCTTCAGGCTGAT
AAATTAACAATGTATGCTGCCATTTC

Sequence 861

Sequence 862

CCCTTAGCGTGGTCGCGGCCGAGGTACACATTCCATGCTGGGTCATACCTGAGTGCCAGT GGAATATAATTTGGAAGGAATAACGTTGTTGAAAAACATCCTCTACAGACAATATGAACA ATGCCTTAGTCATCTATTGATTATGACAATATACTCTTGAACAAATTGTTTTCGGTTCTG GTTTCTGTGGTACCTGCCCGGGCGGCCGCTCGAAAGGG

Sequence 863

Sequence 864

CCCTTTCGAGCGGCCGCCCGGGCAGGTACATGCTCTAAAATGTAAGGATTCATTTATGAG AGAGTGAACATACTGCTTGTAGCTAAAACATTACAGGAGACCTTAAAAAGGGGTATAATT GGTCCCTATGTGAAATGAACCTGACATATTTTTATAAATTATTTGTGCATGACTATCTTT TGNTGATAGCACTAGGAAGACTTNTAACGTTTAAATACTTTATTTGCCCTCAATTACTAT TTAAAAGTCCTATAATTTTAAGTAATTTTACAGCTGACAAAGATAAATATTTTTTTCTTT

TAGTTTTTCTAATGTCTTGGAGGTAAAGTGGAAATGGCCTGTTTTGACACATAATTTCTA
GAACTTGGAGTTAATTTTGATCAGTTCCATTTTGGGT

Sequence 865

Sequence 866

TAGATATAGGATAGTGATACNTTGAANAGGACTATGAAAAGGGACAGTAGGGCTTAGTGG
AAAAAGTTTTAACGANNTCTACNGTTATTGAATNAAANTACATATAGCGNGATTCTTATT
ACTTGAAATTAGGAGGAGAAAGAATTTTTTGAGGTAAATTNGAAAAGACATAAAATAGAC
TA

Sequence 867

CCCTTTCGAGCGGCCGCCCGGGCAGGTACGCCGGGCATGCAGCCAGGCTAGACCGGCTC

Sequence 868

CCAGTGTGATGGATATCTGCANTTTTCGCCCTTTCGAGCGGTTNTTNGGGCAGNTTNTTTCNNCCTTTCTGTGNTATTTGTGGCGGNATGTTGNATACTCTCTACCATGGGGATGAAGACACAAGAATTATGATAGTTCATTGAAAAAGGTTGAGAATTCAGAACTTGTCAGTTTCCACCAATAATGGCAAAGATACAATATGACAAAGTTCAGTTGCTTAAATGAATCTAGGAATGAAGAATCTAGAAATTATAATGGAGAGTGATTAGGAGTTTAAAATGGTTTATSequence 869

Sequence 870

**AAAAACT** 

Sequence 872

Sequence 873

Sequence 876

ACAGCAAGAGGGCAGATGAAGCNGACTCAAGAGAAACAGATNAGACCAGAGAGACCCTGG TTCTTGGTTTGTTCTGAAGNCATGGNCCATCTNCTATTCTAGAATTANAGAGTTCCTGGA AAATTCTTACCANAAAAAATTTCCTTTTGGNTTNGACGCTTAATTGAGGNTAATTTCTAT TNTGGGCAATNTCAAAGNNATTCAANGAAAAAAAAAGGG

Sequence 877

Sequence 878

Sequence 879

Sequence 880

Sequence 881

Sequence 882

Sequence 883

GATAGCCAGCTACATGTGTAGTTTGATCATTCAGTTTAACCGTTTTATCACTGTTGATAT GAACATTGAGTACCTCGGCCCGCGACCACGCTAAGGG

Sequence 884

CCCTTAGCGTGGTCGCGGCCGAGGTACTTTGATACATGTAAAGTGCAAGGCACCTTGCTA GAGAGCATANGAGCTATACTAAGATATAGAGTCCTGCACAAAATCCACAAAATAACATGAA TACAAAGTGTCCTAAAAGTCATGCCAAATAAAACAGANCATATAACTGGGCAGAGGGATG GAGAGTCACATGCTGGAGGAGGTGAGCGTTGACATGGTCTTATGGGATATGAACTTGAGA TGTTGAAGTAGAACTGAGACATTTCTGGAAAACTANATGTATNAACAGAAGCANGAGGAA TAGGAGATGGTTTGGAAAACATCAAGCAGCTCAGTTTCTTGGGGTGGTCCAGGAGAAAGA AGCTCAAACAACATTCAGTGATAACACTTAAAANNATCAAAAATTT

Sequence 885

CCCTTAGCGTGGTCGCGGCCGAGGTACAATAAACAAGACAGTGCCTGCTTGTGACCAGGG
GCTGGGCCTCTTCATAGCTCTTTTCCCTGCCTTTTGTCTTCAGAGTTGATCTGCTTCTTA
CACATTCACTTTTTCAGAGTTTGCTATCTTAGAAGCAAGGATCATTTTTAATTGGTTTGT
TTACTTCAAAGTCCCACTCATCAGAGGCAGNTGTTTCGCTTATATTTTGGCTCAACTACTT
TNTCTGCTTGGTTTAGTAACACTAATGTTTACTAACATTAAAATGAAACCAGTTTTGCAG
CTAGCATCTATTGACCAAATATAATTATTTATTTCAAACTGTATATTCCAAAATTTAAAC
ATATTCAATGCTTATTGAACATCTAAACATATANCCTTAATGAATAANGGGAAAATATAA
CCATCTGGTTTTTGGATCTGAAAGCCACACCCACCTGCTAGANTANTTTGGGGAAAGGC
TTTTTANTTCCAAGTTCAAAGGNTGAATTCTCCCGAGGGNNGNNGGGGGNCTTCCCTTCT
NAACCAGCAANAAAACCTNGCNCCAGTTTGGGATTTTGGGNGGAAAATAAACCCNAATGA
NGCATTTTACTTTCCTTTTTT

Sequence 886

CCCTTAGCGTGGTCGCGGCCGAGGTACATATGGCTCGGCAAAGGGGGACTGGATTAATAA
ATTCTGGTAATATAGTAAGGACAAAATAAATGTAAAAAAGATAGAAGTAAATGGAGAACA
TCAACATGAACGCGTGCTCCTTTGAGTAGAAAGTAATTTTTCTGCTTTGTCACTCAAATA
GCTGGCAGACCTGACATCACCCTGCCTCTGCTTCCATGCTCTAAAACTTTCCTGGGCCTC
AGATTTGGATGCTAATATGATTTTCCACTTAGTGGATAAGAGCTCCCTGGAGAAGGGCTC
ATTCTTGGATGGACAACAGAATTAGAGCCTGAGTTCTAAGAGCTTAATAAAACAAAAG
Sequence 887

CCCTTCGAGCGGCCGCCCGGGCAGGTACCCGATGAAAGTTTAAATCTAATCAACAGTATT
ATGCACTGGTTGAAGAAAACCAGGATTAAGACGAGGATAGTCAGCATGGAATCTAANAA
GGGAAAAGTCCGNTAACTATATGTGTTCATNAGATTCTAAAGCTGTTAAGGGAGAAAGAC
CCTGAGTCTAATGAATATAAACTTTAAATTTAAAGAAAAACATGNTCTGTTATAGAAAAG
TGGGCTTTTAANTTTTGTAAAG

Sequence 888

CCCTTAGCGTGGTCGCGGCCCGAGGTACCATTAACCGTCTTTTAAAAAATTATTATTAGT TTCAGTGCTGTTTCTTGAGGGAGCACCGGTGGTGCAGGTCAGGTTTGTCTTCTNAAT

Sequence 890

CCCTTTCGAGCGGCCGCCCGGGCAGGTACTTGCCTTGCAAAATTATATTACAAGAAGAAG CACACTTGTTATAGAAGTGCTGAATTGTATGGAACCTAAATCTGTCAAGTTACCTGTCTT TCAGGTCCGTCTCCCCACCTCCCAGACCTCATTATATTATCCCGAAAAGAACACGATCTC TTTAAGGCTAGGCAAGTATTGCGCTGATGAGCCAGGGACTGCCCACCAATTGGCAGGCCC ATTGGGTGATAAATGTCCAAGGACCTCTAGGCTGACGACACATTTTTCATCATTAATCCA GTCTATTGTAACCAGGGCCACTCACATTGATTCGGACTAGGGGGCATCATCTGCTGTTAA AGAGGGTGATGACTCGCTAAAAATGAGGG

Sequence 891

Sequence 892

Sequence 893

Sequence 894

Sequence 895

Sequence 896

CCCTTAGCGTGGTCGCGGCGAGGTACCTTGAGCTGCCTCAGCACTCTTTTGCCATTCGTG CTAGAAACAGCCAAAGCCAGACAACCAAATTACAGATGCTTAAATGTTAATGCCAGACAC CAAGGCTCCGTGAACTTCCCTGTTGAACATCTGACCCCGACTACTTGAGGACATGAAACC TAACTGTGCAGCTAATTACACCTTCCAAGGGCAATGACATCGGGTCCTATGATTTTATTC AGGAAAGCAATAAGGCAATCGGGGTCACTGTGAACATCATTTGAAGGGAAGTAACTTCTT AGCTTTATTCCACAAATGGTCTAT

Sequence 897

AGATCTACATTACTTTACTAGAAATATAGGGCAATAATAAAATTTCCAAAGCCAAACTGA ACGATAATATATTTCTTTAGAAAGTCTCAGAAAACCCATTCCTGAATGACAAAACGGA GAGATAACTTACAACTAGGTGATATCTGAAGTTAAATTTTCTTGGTTATCTATTTCAAAA ATTCACAACTATTCTGCACTAAAATGTTTCACTGGGTCAGGCACAGTGGCTCATGCCTGT AATCCCAACACGTTGGCAACCTGAGGCAAGAGG

Sequence 898

Sequence 899

Sequence 900

Sequence 901

Sequence 902

CCCTTAGCGTGGTCGCGGCCGAGGTACTTCTATACAAGGCAAAATGAACTCTAAGTAAAA AAGAAAATCACACTTCTAAACACAAATTAACCATTTCAGTATTTAATTGCTCCTAAAAGG TGTATTCTACTTCATTAAATGTAAGAGAAAAGGTTACCTACATTACGCAGTTTAAGAAAC AGGATAAACTTTAGCATATAAACCAGTCTTGATTACAATTTCACACTTTCAACCATCTTA TTTATACCTCTACATTAGATAATCTTTAAATTTCCATCATAAAGGTTTTCCCATGGTTAAC CTNCCATATAAAATTTTGGTAATCCTGCCC

Sequence 903

Sequence 904

Sequence 905

CCCTTTCGAGCGGCCGGCCGGGCAGGTACTTAAATAAAATAAAATTAAAACAAATCATTT TTAGAGATAAAGAGTGAAGTTACTGGAAAAAGGTGACTAGGGACTCTGTTTATGAAGAAA GGTTAGTATTTAAATCATGAAAAAAAGTAAGAATACTTAATTATTCAAGTAACTTAAAAT

TGTAATTCAGAATGGCTTTTTATGTATCTAAAACAATCTGGGGCTGCTATAAAAATTCAG TCAACTTCTAAACTTCCAAACACAAAATAGTTATACTCAGTCTAAGAATATCCGACCTAC CGTGCAGGACCAGAGGGCTCATCTCTTGCCGAGCTTAATACAGTTT

Sequence 906

Sequence 907

Sequence 908

Sequence 909

Sequence 910

Sequence 911

CCCTTAGCGTGGTCGCGGCCGAGGTACAACCTAGCCAGCTGCACAGCAGCTCTCCAAGAA
AAAGGTGTATATTAGACAGATTCAATTATTCATCTTGTGATTATGAGTAGTAACCAAATT
GTCTATGTAATTTTCTTATGGTGAACTACCCAAAGCAAGGCCTCACCTTAGGCTACCAGC
TTGACTCTTAAGTGGACAGAAAGAGCCAAAGGCTAAAAGGTTTGTGAGAAACCTCATGAG
CACTGAGTGTTCTAGTTCCAGATGAAAACCGGTTTCAGGTATGAAGCAAGAGGGAGTGCT
AATTGGTAGAAGTAATTACATCTT

Sequence 912

Sequence 913

CCCTTTCGAGCGGCCGCCTGGGCAGGTACCACAAAGTTATTGCCTACATCCAGGTCAAGA AGATCTTCTACTGTATTTTCTTCTAAGAGCTTTTACATATAGGTCAATGATCAATCTAAA ATTAAGAGTTGTGCAATCATTAACTCTAGCTTTAGACTGGTATACTAATTGGTTTGTATA CGAACTGGGTTAAAGGCATAGGACACATGCAGGCTGTGTTCATTTCACAGCAGGGCTCTG

TAATTAGGCAATAATTACTTACCATCATACCTAGTGAGGCAATATGGGAGAAACAAAACA GGCCATACAGCTTCACTATTATTCCTACT

Sequence 914

NNCACCCCTAGCGTGGNCGCGGCCGAGGTACTTGAGGACCAAGCCACAGAGCAAGCGCTA
AAAAAAAAGTTAACTAGAACCTTACCACTNTTNCACGCACCCCAATTNCATAAAATGTAT
CAGNAAAAAAAAAAAAAACAATNATCTAAAGANAAAAAAGNAAAGAAAAANNATNNANCACATAG
GNAACNGGGTGTCAACTAGGNAACNGACCTATANNAANNNAGGAAGANAGNGNCTNCCTT
CCTCAATNNNCAGANNNACGGAGGGGAGGCTCAAAAGGCCCGAGAGGCTCNCTACAAGGA

Sequence 915

Sequence 916

CCCTTAGCGTGGTCGCGGCCGAGGTACTTCATAGAGGTCCAGACCCCTTGCGTCTGGCAT
TCCTTTGGTCTATAATTCAGTAAACTCTGCTAAAAAGGAAACGAGACTAGCTTGCTGTGG
CCCCTTAAGCGACCCAGGGTAGCTTGTGATGGTTCAGATTATGATTTGTTCTAGAGCTTT
TCCAGAGGCAGATGTTGAGGAGTTTATCCTATTTGNCCCCTNCCCTTTAAACAAACAAAA
GTGCCGGCTGGACGCANTGGCTCATGCTGGTAATCCCANCNTTNTGAGAGGCTNAGGCAG
GCGG

Sequence 917

Sequence 918

CCCTTAGCGTGGTCGCGGCCGAGGTACTACAATTATAAAGTTACCAATAACTTTACATTA
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TCATGGCAGTATGAAATGTGTCCCTGATTCCCTCCGACCTGCCACAGAATACTGAAACAG
TGGCCGTGGGAAGAAATACCAGATGGTATGCATATGGCTTTGGGAACAGCTTTCAGCAGT
GGTCACTTGTCTTTTTTTAATGCATTTCAAAATGTGTTTGGTTAGCAAAAAATAATGAGA
TAATTCCCTCAAATAAATG

Sequence 919

Sequence 920

Sequence 921

CCCTTAGCGTGGTCGCGGCCGAGGTACTCACATGTAAACTTCTACTTTCCCCTTCAGATT ACAGCAACCATCATGCCAAAGCTATACACTCTCAGGGAATCCCTGTGGATTTCACTGATG ACCACTTGACCAACTATCATAAAGATCAAGGCCAGGGGTTCTCAAACTCTCAACATTTGT GTGCTCATCTCCCCTTCACCCAGAGACTCCCCAGGGCTGCTGGGCCACACTTTGGTTTGT TTGACTGGAACATAGTTTGAAAGGGATGGAAATTTCCAAAAGGTGTTAATAGACACATAA

## AGATTTTAAATATTAAAAAAAAGAAAGAAAGA

Sequence 922

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TCTGAGTTGATGATTTGGAGCTCAAAGAGCTAGCGGAGGGAAAAGCTGAAGCCATTCAAA
CACATAATGAGAATTGGAGATGTAAAAGAAGGCTGAGTTCTAGGAGTTGCAACAACTTAG
GAGATAACAGAACCAATTCGGAATGAGCAGGAATTGTAGGAATGCAGGCGAGGACTAGAA
GAATCAGCTACATGCTGTTTACTGGCAAAGCAGGAGAAATGTGACTGAGGACAGTATGCC
ACTGAAAACTGATGAAAGAGGAGGAGGACAGGAGG

Sequence 923

CCCTTAGCGTGGTCGCGGCCGAGGTACTGTTGTCTCATGCTCTCTTTTCTGTTAATAGCAC CTCAATTCTACTCTGGGGGACATTCCTCCTCTTTTTTGGTCTGGAATGTCCCCTGGCTT CAGGGACAGCTCAACATGGGCCTGGACAGTCAAATTCCATCCCCAAGCTTGGGACTCAGG GAGACCATCCAGTGACTTGTTCCTGAAGTGCTGGGAAGGCAGAGCNTCCTTTCTGCGGGG TGCTGAGTGATGGGACGACAGNGTGGAGCTACTGNGCTCTCCAAGCCGGNGCCCAGGACC AGCCTGCCTGAGAACGAAGCCAGC

Sequence 924

CCCTTCGAGCGGCCGCCCGGGCAGGTACTTGCCTTGCAAAATTATATTACAAGAAGAAG CACACTTGTTATAGAAGTGCTGAATTGTATGGAACCTAAATCTGTCAAGTTACCTGTCTT TCAGGTCCGTCTCCCCACCTCCCAGACCTCATTATATTATCCCGAAAAGAACACGATCTC TTTAAGGCTAGGCAAGTATTGCGCTGATGAGCCAGGGACTGCCCACCAATTGGCAGGCCC ATTGGGTGATAAATGTCCAAGGACCTCTAGGCTGACGACACATTTTTCATCATTAATCCA GCCTATTGTAACCAGGGCCACTCACATTGAT

Sequence 925

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Sequence 926

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Sequence 927

Sequence 928

Sequence 929

**GTATAAATATCAATAAATGTTGCAATCACAA** 

Sequence 930

CCCTTAGCGTGGTCNCGGCCGAGGTACGCGGGTGGGAAAGGGAGGATGACTCACTTACTC
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TCACNNGTCCCCCCACCTCTACCATGATGTCCTCATTCTGGGAACCCCGAGCAGGGATAG
TGGCTTGGGCCCTTCNTCTGGCTTTTCTCCCCACNCTTTGCTCCACTTCTAACATTTTTC
TNCCTTCATCTNACATGAAAGGGACAANGGGTTAACCCCAAGNAGGGAGGCAGAAAACA
ANGNNCCCCACATCCTGGCTNTGCCTTCTGAC

Sequence 931

CCCTTCGAGCGGCCGCCCGGGCAGGTACGCAGGGATTTANAGACAGGGTCTGGCTCTTT
TGCCCAGGCTGGAGTGCAGCACAATCATGGCTCACTGCAGCCTCACCCTCCTGGGCT
CAAGAGATCCTNCCACCTCAGTCTCCCTAATAGGTAGAACTACAGGTGCACACCACCACG
CCTGGCTAATTTAAAAATTTTTTTTATAGANACAAGGTCTCACTATGTTGCCCACACTGG
TAAAGTATTTTTAAATTTGAGACATGAATAATGATGCAAATCATCCTTTNTATGGGTCTG
ATTCTGTTCTGTTACCTTATTCAAGGACTAA

Sequence 932

Sequence 933

Sequence 934

Sequence 935

CCCTTAGCGTGGTCGCGGCCGAGGTACCTAATTCATAAGATAAGGATTAAATGAATTAAA ATATATAAATCCCTTAGATAACAATGCTAGGCATATGTTAAGCACTATGTTAGTATCATC AAATGTTGTTGTTACTGTTATGGAATTTATCACAAATATGTAATTATATGTTTCGTAGTG ATTATTCATCACCCCTACTGGACTCTAAGGTCTGTGAGGATATGTCTATTTGGTTTACCA CTGTATCCTCAACAACTGCTGGTTGTCCCTATTGTAGGTGTTAGGTATTAAGTGCATGAT AGTGAATACATAAAGGTT

Sequence 936

Sequence 937

CCCTTTCGAGCGGCCGCCCGGGCAGGTACACTAAAAATAGAATATAAGGCAGTGAAATCA AATCCTGGCTCACTTGAAGAAATAACAGTCTGTGGGCAACTNGGTTGTTTCTCAGGTCAC CTCAGGGGACAGATGGTCCCTAAGGTGCAAAAGAATGAACTGGTGCTGATATATGACTGA TAAGTTTCTGTAACGGGCCACTGACCATTTCAATTCCCAAGGAACATAAATTACCTTTTA GCCTGTGTATTTACACACAAATATGCAACCTGCAAACTTCTTCTGAGGACAGATGTCAAC

### TACTTTTCATTTTTTTTTTACAGTCAAA

Sequence 938

Sequence 939

CTTCCATACTCTTTTAATTGGATATGCCAGTGTGTNTCANTAATTTCCAGTGGCTGTAAA ACTTTGAGAAATTTTGTAGCTTTTAGAAACCACATACCTGTATTGCCTGATTGCTTATTA AGTGATCTCTTAGAGGTTTCCAAAGTTATGAGTTTGAGTTTACAAGTGCAGTTTTTTTCC ATGAAAATTTCAGTGGTGACAAATTATAGAATTTATCATTCAATTCAGTCTTAACTAGAA ATAATTGCATATAAAAACAGGTTCTTGACTGTTCTTTT

Sequence 940

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Sequence 941

Sequence 942

Sequence 943

CCCTTCGAGCGCCCCGGGCAGGTACTTCAGGAGATACATTCTGCTAGTTTGGGGTG
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ACTGATTAATGTGTATATACTAGTTCTGTTACTAAGGAGGGATGTTAAATTAATCCCTAG
CTGTAATTGTGCATTAGTTTGTCTCTTTTCAGCTGTTCTAGCTTCATAAATTTTTGGAGC
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TTAGGAAAC

Sequence 944

CCCTTAGCGTGGTCGCGGCCGAGGTACAAAAATCAACTTTCCTTTTTACTATCTGGAAAT
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AAGTATAGGTATTTACAAATAGATAAACTATATTCTTAGATGAGAAATACTTAATACCCAC
TTTACAAAATTAAAAATGAATTACAGCTTTTTAAAAATAGATTAAGCTGGGTGTGATGAC
ATGGCACCTATAGTCACAGCTACTCAGAAGGCTGAGGCAGGAGAAGCACCTGAGCCCAGG
AGTTTGAGGCTCTAGTGAGCTAT

Sequence 945

Sequence 946

CCCTTTCGAGCGGCCGCCCGGGCAGGTACTGCATATTTAATGAATTATTTTATAAATTGC
TGTTGTGAAGCATTTGTGAATGACCTGCCTCCTAGCTTTCAATGCTATTGCCCAGGCTNG
ACTTTTATTGCAACTGTTTTATGATACAGTTTTGCATTGTATGTGTTACTTTTTAAAGA
AGCATTTCCTGGGAGGTTTCTTTTTCTGGTTATGAAAATAATATATGCTTATGGGGAAAA
ATTGGAAAATAGAAACNAGTATCTAGAAGAAAAAATCACTCATAATTCCANCACCCTGTTA
ATACTTTGTCTTTTCTTACAGTTTCTAATA

Sequence 947

CCCTTAGCGTGGTCGCGGCCGAGGTACCAGTAGATGAGAACTACTTATTTAGAGTGGCAG AGCATGCTATAGAAACAAAATATGAGTAATTCTAACTGTAGTTATGTTATATTAGCATAG TGAGATAGTAACATTAATAGAATTCCTTAGGTGGAATTTCTTTAATGC

Sequence 948

CCCTTTCGAGCGGCCGCCCGGGCAGGTACTGCATATTTAATGAATTATTTTATAAATTGC
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CTTTTATTGCAACTGTTTTATGATACAGTTTTGCATTGTATGTGTTTACTTTTTAAAGAA
GCATTTCCTGGGAGGTTTCTTTTTCTGGTTATGAAAATAATATATGCTTATGGGGAAAAA
TTGGAAAATAGAAACAAGTATCTAGAAGAAAAAATCACTCATAATTCCAGCACCCTGTTAA
TACTTTGTCTTTTCTTACAGT

Sequence 949

CCCTTTCGAGCGGCCGCCCGGGCAGGTACCAAGAACTAAATTGTGATACGATAGGTGACT
TATGAGTAGCACAGAATGTAATAGGCCCATCTCTACCTAGTTCTGGTCACCACACTTCTG
TCAAGGTAGCTCGGAGAGACGGTGTCTACTTATTCACCACATCATGAGATCACCTCAAAC
TGAGCAGGCAGCCAATGAAAACCGTGAGCTTTCTTTACATTAACTTTCTGAAAGTCATTT
TTTCTTATTCCACTTTGTGCCTTTTTTTAAAAGCTGCAGCTTCATGGAATTTAATCCTGG
TATTTAAAACACT

Sequence 950

CCCTTTCGAGCGGCCGGCCGGGCAGGTACTTGGTAGGTTGATCTCTTTCATTCTCATGGT TTAATTACCATCTATTCACTGATTACTCCCAAAACTGTATCTATAGTCCAAGACTGTTTC TAAAAGGTCTGCACCCACATATGCAAATAAATA

Sequence 951

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AACTTCTAGTGAGATTTTTTTCANAATATTTTGGATGGTTCTCTCACTTTNGTTATTAAG
CATTAGGGAAGAAGATTCTGCAGCCTACTCAGGTGAGCCAATCTCATGGCATTGAACANA
NAANATATGTTTTCACGTCTTTAACCANTGTTTTTCATAGTGNAAGTCAGGCCTTTCTCC
TTTGATCTAAGTGGAACCAAGAGGTTAGATACTCCCTTTNCTTTAGTTATAAATGGGCT
TCATGTAACT

Sequence 952

CCCTTAGCGTGGTCGCGGCCGAGGTACACTCTGTAGGTCTACAGGTAAAAAGCTATTACG
TTGCAAACATTATAACGTAATGTAAGGTCTGGATTACATGCCTAAAAATCCAATGATTCT
TGGAACCATCAAATCTGTTAAGACTGAAAAGAATACCAATGTTTAAATATATCTATAAAA
TGCAGGTCAAGGGGCTAAGAAAATTGCAACACTAGAAAACCAACAAACTTAGGTTGTTCT
AACATACATACACAAATACAGGAGGGACGTTTATGGGTCACATCTGCGAAACATTTTTTC
CCAAAAAGCTGAATTTT

Sequence 953

Sequence 954

**TACA** 

Sequence 955

Sequence 956

Sequence 957

Sequence 958

CCCTTTGAGCGGCCGCCCGGGCAGGTACTCCATAATATAATCTTTTAAATGGGCAACTTC
TAAATATTGATACAACCATTAATAATAATGCTTATAGGGTAAAAGAAAATTTTTGAAGCA
CTGAATTCAGTAACCTGGGTCATGGTCCAATTTTGCTCACTACTTCATATCTTTTATGTA
GATTATTCCTATAAACATGTTCCCTAAATTCCACATCAGTTTGTAAAGTCAATGGATTAA
ATTATTCAAATGTAGCTATTTAACGGTCAGTAACAATGCCTAGAAACCTAT
Sequence 959

Sequence 960

Sequence 961

TANAACAATGTCATCCTTTAATAATCTTTAAAAGAAGAACAACTAAATAACCCAATNACA AAATTTGAAAATTAGGGTCAAACCT

Sequence 963

Sequence 964

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Sequence 965

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Sequence 966

Sequence 967

Sequence 968

Sequence 969

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Sequence 972

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GCAGATCATTCCCCATTCANCCCTGGGTATGGGACTGAACTGTGTACCTTGCCCGGGGCG
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GGGATTCCCGAGNCTTCGGGTTACCCCAA

Sequence 973

Sequence 974

CCCTTTCGAGCGGCCGCCCGGGCAGGTACAAAGCTAGAAGCAGCCTGGTCCAGATGGCTA TACAAACCCNANACTGTCTACACCCAGACTTTATTCTTCTACAACCAAATTCCTCAAACA CACAATCTTGACCAGTANCAGTTGAAANGGGAGTTTAAGGTGGGGGTGA Sequence 975

CCCTTAGCGTGGTCGCGGCCGAGGTACGCGGGCTACCAAACCTGCATNAAAAATTTCGGT NGGGGCNAANAAANGNNNTTNNCCNANCCTCCGAGCAGTACCATGCTATATTGGTCACTG TAGCTCTGGTACATANTTTTNGAAGATTGGGGTAATGTGGATTCCTCTAGCTTTGTTAAG CTCTGTTGTTTCACTTAGTATTACTTTAACTATTAGGGCTTCTTTTTTGGTTNCATATT AAATTTGTAAAATAAAATTT

Sequence 976

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Sequence 977

Sequence 978

Sequence 979

Sequence 981

Sequence 983

Sequence 984

Sequence 987

Sequence 989

### Sequence 990

Sequence 991

TGGCCGGGGCNCAAAATTCANAAGNCAAGGGTTGGGGGNATCCCCGNGGGGAACCTTGGG G

Sequence 993

ATGCAGAATTCGCCCTTTGAGCGGCCGCCCGGGCAGGTACCCCATCAGAGTGTTTCTCTT GGCTTNCCTGTATGTAAACCTTACCTAATACTTTCAGTCACCACTCTTTCTGTGTTCATT TCCCTTTTAAGNCAAAAAANGGGANGNAAGTAAGTTGGNNATTTGGNGTTTCAAAGNGNC CAATTGNCTTTTGNCTTTTTTCACA

Sequence 994

CCCTTAGCGTGGTCGCGGCCGAGGTACCAAGTTGTTCTCAAACTTCATGTTTGTGTATA CAAATCAGCTGAGGCCTTCACTAAACTACAGATTCCATGGCCTGGCCCTCAGAGATTTTG ACTCAACAGGTCTGAGTTGGGACTAGAAATATGCATTGCTAATAGGCACCCTGACAATTC

CGATGTAGGTGGTCCTTAGAACATATTTTGAGAAATATTCTGTAGTCTGGCAGATAAA GAATTCTTAACAAGGAGGTCCTGCCCGGGCGGCCGNTCGAAAGGGCGA Sequence 995

CCCTTAGCGTGGTCGCGGCCGAGGTACCATCATCTGTTTCCCTCTGGTTATAAATCTTTA
ATGAAAACGGATTTAAAAAGTCACATTATGATGCTCGAAGCTCTGACCTCTCATCACAAT
GAGAAGCAAAAGACATGCCATAAAGATGATATTTCCCACAGGAACGATATTAGAATTATG
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TAGCAAGGATACAGTAGCAAGGATGGGCCTCAATAAACATTTAAAGTGGAAAAATTCTTC
TCTAACTCATATCAAGTACCTGCCCGGGCGGC

Sequence 996

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TTTTTTATTCTCTAAATTTCGGGACCTGATGCTAAGGAATGTGAATATACAGTTAGGTTC
CTGCGAACCCTGTGTTGGTTCAAAAAGGCTGGTGGAGGGAAATTTATGACACTAAATGCT
TATATTAGAAAAGAGGAAAATTGGCCGAGCACGGTGGCTCATGCCTGTAATCCCAGCATT
TTGGGAGGCCGAGCCAGGTGGAT

Sequence 997

Sequence 998

Sequence 999

Sequence 1000

Sequence 1001

Sequence 1002

CCCTTAGCGTGGTCGCGGCCGAGGTACATCTGTTTCTGAAAGCATTTTTCACTGAACCAA
TTTTCTATACCTTTTCTTGTATTCTTTTCCTTAGCTTTTGTTTATATGGTTGCTATATT
TTTCAAGCCTCATACCAGTCATATAAAACCATGATAAAACTTCATCAAAGCATACTTGGG
CAAATTTCAATTATCAAGTAAAATTGTAAAGAAAAATTTTTTACTAGTTTGGAAATAGAT
CTACATGTTTGATTTTCTTTCCTTCCTCCCTCCTTTGTTTCTTGTCTTTCTCTCCCCTTT
CCTAAAAAGTTAATGGCTATCATTATCTTCACCAAATTAGTGTTTGGTATACCCATAA
Sequence 1004

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Sequence 1006

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Sequence 1007

Sequence 1008

CCCTTCGAGCGGCCGCCCGGGCAGGTACCTTCTTGCCTACAGCGTTTAGCTCCGTTTGTT
TTGCATAAAGATCTGTTTTCTGACTTCGCATGAGGGGTAGATGTTCAGCTTATTCTCACT
ATGTAAATTACTTAGTAAATAATAGGAAGAGATGTTGAAATACAAACTTTCTGCCACCAG
ACCTTCACTCTATTGCAGTCATTTTCTCCCACTCTCCCCCCTCTCTCCCACTTCCTCTGA
GGATTACCTTCCCCTCTCTCANCATTCCTCTGTCAGTGGCTTTTTTTTTCCTTTGGCATG
CAAACATGCTCAAGTCTGTCTTATA

Sequence 1010

CCCTTAGCGTGGTCGCNTNTCGAGGTACTCTTTTCAGATGAAAGTGTTCGGTCACCTGGA ACCTGTGAGTATGTGGTTTTTGATCTGTGACTAAACTGTCCCCATTTCCCAGTTTCTCTG 165

### Table 1

CTCCGTCAAATATCAACATTTTACCAGGTTTCTCTGTTGTTGCCAAACCTGTCATTTTA
TTTGGTGTGGCTTCTTGGGAAACTTCCATGGCCCATTTGATGGGAATCAAACAGTGAAAA
CAAGGACAGATGCACCAGAGGTGGCATCAGGAACAAATGGGTCATAAGAACTTACCTTGG
CAGCAGCCCCAGAATGGTNAGGAGGAAAGGCACTNTAAGGTATCAGAAGGTAGAAAGGAN
AGGTTGGATNATAGNAATGGGGGAAAGGG

Sequence 1011

CCCTTNTNNTGGTCGCGGCCGAGGTACTGAGACACTGGATCCTAAGAAAATCAGAGTTAT AGCTAGTGGCAGTTATCAAGGGAATGCAGAGGTTTCTGTATTCTGAGCATGTTCCTGTAA TAGGATAGATAGGCGATGTGGCAGCAACAACTCCCAATTCGTAATGTCTTAAAACAAAAA CAAGTTTTATTTCCCATTTATGCCATGTTTCCAGCACAGTTTCTCAGAGGGCTGTGCTCC ATGCATTTACTCAAGGTCTGGGAATGATCATGGCTACACTATCTTGCAGCCACCATATTT GGAACCTGTTGCCACTCTGATGGCAGCAGAGAACAAAAGAAA

Sequence 1012

CCCTTTCGAGCGGCCNTTTNNGGCAGGTACGGGCTTTTTTGTTCTTGTGCAGTAACAGTG
AGGGCATGATTAGCCATCTTTGCCAGCTGATGTCTTGTTGGACACCTGCCTTGTTACCAC
TCTAACAGGCCCGTGTCAGCAGCTCCGCTTCCTCCTGACAAGCTGCGAGCACAGGGGACA
GCACAATCTGAAACTCTTACNGATACCAACAGCAACAAAAATGAAAGCAGTTATGGTGGG
CAAGCATTAATCTAAAATTTTTTTTAA

Sequence 1013

CCCTTTCGAGCGGCCGGCCCGGGCAGGTACGCGGGGGGTCTCACCATGTTGGCCAGGCC

Sequence 1016

Sequence 1017

Sequence 1018

Sequence 1019

Sequence 1021

Sequence 1022

TTCTAATTANCCCCAACACGGAAAAGAATGTAACACAACTGTCTTAGTTGTGCCATAGAG TTAGAATCTATCTATTAACATGTTTTAGGTNATAACAAGAAAAATAATAAAAACAAACCT ATTATGAGAAGCTGCCCATGCCAATAAATTTTGAAACATTACCAGGAAATATAAAAGGAA NG

Sequence 1023

Sequence 1024

CCCTTAGCGTGGTCGCGGCCGAGGTACCCACAATGGAAAGATGATCTTCCTGCATTGTGA
AGGTTGTTCTCATCAACCAAGCCTGCAATGACTAGACATTCTAAAGAGAAGAGTGATGGC
AATGGAAAGAGGACACATCCGCTTGCCAGGTCACTTCTATCAGTTGATGACATGCCATAT
TGTTATGGCTAGGTCAGCTTTCCACAAGTATGCACATGCAAAATAGAACTTGGGAAAAAA
ATCTTTGATTTGGCCCTTTTACCAAGTGGATCAGGTGTCAGAGTTCAAGTTGAGCAAAG
GTCAGAGTTTAA

Sequence 1025

Sequence 1026

Sequence 1027

CCCTTAGCGTGGTCGCGGCCGAGGTACTAATTCTTTTCCTCTTTCCTAGACCGATTCTAG
TTTGTTGCCTTCCCTTTCCTCGGAAACCCCAAGTTTGTGGATGCTGCAGACACTCTGTGC
CCCCCTGCATGCTGGGTGCCTGGCCAGCTGCCAGGGCATAAAGACAGAGACGATGTGGCC
TTTGTCCTTAAGAATGAGGTTTGAAAGCCCCAGTTCTTCCATGTTAGGTGATTTCTTGCA
GCTCTTGGTATCTGCAGAATTAGTGTGAATGCTTAAAAAAATATTAACAGCTTT

Sequence 1028
CCCTTAGCGTGGTCGCGGCCGAGGTACTATGGGTGTAGTGTTACTATTACAGTTAATCCG
TCCTTTGTGTGAAGCTGTTAAATGCAGTGAGGATTGGAGCACTGTCCACTGAATCTCTGT
GCAACAACTTACTCGGTGTGGCAGGGGTNTCCNGGTGTCTGGCTCTGATCTTGGTCGCTG

GATAGNCGNCTGTNTNTCTTTAGGTGCCCAAGGCGACGGC

Sequence 1029

CCCTTTCGAGCGGCCGCCCGGGCAGGTACTTAAACATTTAGACTCCTTTGTGCCTTNTGG
AATGGGAATTGCTTAAGCTGTCCTGAAAAAATNGCCTTTAACATCTGTTNGATTGAGATT
TGTGATACATAGAAGTTGGGAGGAAGATGTCGGAAAGCCCTAAGAGAGCTACTTGCCAAC
CCCACCATNAGGTCTNCCTCAGTGTTCCTAGTCAGGACAGACGAGGCCGAGTCTGAAATT
ACGATAAGNCTTTGAATGCAGCATAAACAGACC

Sequence 1030

Sequence 1031

Sequence 1032

CCCTTAGCGTGGTCGCGGCCGAGGTACAGTGGTGTGATCGCAGCTCACTGCAGCCTCAAC
CTCCCGGGCCCAAGCAATCCTCCCACCTCAGCCTCCCAGTAGCTGTGTTCCAAAGAAAT
TTATTTATAAAACAGGTGTTGGGCTGGACTTGACCCGTGGGCCACAGTTTGTCAACTGCC
ATTCTGTAAGCTTAACATGTGTTAATTACTGCAATCTGAATAACAATGCTATGATATAGA
CACTGTGTTCCTTTTAATAGACAAAGGAACCCAGGCACAGAAGGATTGACTAATATGACC
AAAGTCACACTGCCAGTGAGTAGCAAGCCTGAGCTCTGAACCATGACAGTTCACATCTTC
CACGACAGCAGCTTCTCAATGCTCTTTGGAGGGACCAGAGCCCAGGCAGTAGCAACGGCT
ATGAGGTGGTGAGACATGACCAGCAGATAAGCCCTGGGCAATGGTCCAGAGCTGGAGGGA
GTGGAGAACTAGCCATTTGTGACTTTTGTGAACAATCCCTGGGGAGTCTGGAAATTA
Sequence 1033

Sequence 1034

TCGCCCGCGTCCGNGNACGCGTGGGCAGGCATTANTTNNNGCCCAGTTTATGAGTGTGA GCATACCACAGTACTGATTACTGTGAAGCTGAGNCCCATTTTATATGTTNATTGATGTTT AAGATTTTCTGTTCAACAAATTGTTCATTTTCTTTGCCCGTNTTTTCTTTNTGAGTAATN CTTTGTATATTCNGGATGTTGATCATTATGGATTATAAAA

Sequence 1035

Sequence 1036

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TGTCCTGTCATCTTTGGCCACGTGCAGGGCCACGAGCGGAGCCTGCTGGTGTCCACGGAC
GAAGGGAATGAGAACTNCAAGGCCAACCTGGAGGAGGTGGCTGAGGTGGTCCGTATCACC
AAGCAGCTGACCCTGGGGAGGACCGTATAGCCCCAGGACATCNNCGTCCTCACGCCCTAC
AACGCGCAGGCCTNTGAAGATCATCAAGGCCCTTCGGCGAGAGGGCATCGCCGGGGTGGC
CGTGTCCTCCATCACCAAGAGCCAGGGGAGCGAGTGGCGCTATGTGCTGGTGAGCACCGT
CCCGCACCTGTGCCAAGAGCCACCAACCAACGTGAACCTTCTCAACGCCGNCCCAAG
ANGGGCTCTGNCTGATCNGAGGACCACCTTCTTNTTGCGCTTGTTGCCCCCTTTGGCCGT
AANCNTNCTGGACNTTTTGCGAGGNTTAAAAAAAACCTTTTTCCCTGGCCGGCCAGGTGCC

CCTTNTTCAGGAAGGCCAATNTGCCTTTCTGAAAAGNCTTTTCACCTGCAAGNTGCCAGG ACTGGGANGGGAAAGTTNAGGGCCCCCC

Sequence 1037

Sequence 1038

Sequence 1039

Sequence 1040

Sequence 1041

Sequence 1042

CCCTTAGCGTGGTCGCGGCCGAGGTACCCTGCTTTGATTATTTCCGAATCCAGTGGGTAG
AGAAGGTAAAGGCAAGGGCTCACTGGATATTTTTAAATTGTAGGATGTCCTTTGCTCTG
GGTCAATTTTAGGATCAAATATAAAAGCACCTATAGCTCAGAGTATCTTCTAACATAAAA
CTTCTGAGATACCAGAAATTTTCCAAAACATGGTATAAACAGTATGAAACACTGGGTAGA
TAAAAGCTTTCTCTAAATCTTAAAGTGCTCAAATATCATGACCTGATTTTTTAGTTTTAG
AAATCAGATATTTTTCTATTCCATATCTTAAACTTT

Sequence 1043

CCCTTAGCGTGGTCGCGGCCGAGGTACCCGTTTGTCCATGGCTATTCCAAATACCCCCAT GTTTATTTAAAATGTATATATAATCAGTTACATAAAAAGAGGTATGCTTAAATTCTCATG ACTCTATGGTTGGACCTCTGTGGTTGGAGCAGGCAATAGAAATGTCTGTAATTCATTTAA AAAAAAAGTGACTTTCCTACCTTTAGATAGTGAGGACAATCTGTTAACTCTTTGTGTTG ATAAAAGCAAACATTTCAGGGCACGGTGAAAGAAATCTCTACCATGTATAAGGTTATATA TATACCAGAAGCAGTGGAGTTAGGACCAAATTAAGATTTGA

Sequence 1044

CCCTTAGCGTGGTCGCGGCCGAGGTACATAATGTAATTGTTACATATAATTGTTGTATAC

Sequence 1045

Sequence 1046

CCCTTTCGAGCGGCCGCCCGGGCAGGTACAGCACTTTCAAAGTAGTGGAATATAAATCTT
TCCATTTAACAGCAACATTCAAATATTTCCCATTCTGCTTATTATTCCTCTCTGAAGGTG
ATACATAGAAATATAGGAGCAAACACAGCAATGCAGGCGCTCTATGATCTGGTTTGCTCA
CATAGATCTTAAAAGGAGAAGAATGAGGGATTTGCCTACAACCCACAGCCAATCTATGTG
GACACAAAGGGTGACTTCTTCCTTCTATTACGTTCCTTGAGGTAGAAATGGTAAACTAGC
ATGACCTCGAATCATAATTTAATATCATTCTA

Sequence 1047

Sequence 1048

CCCTTTCGAGCGGCCGCCCGGGCAGGTACAACACTTTAAAAAGTGAATTNTAAGCTATGT GAATATCTCAATAAAAACATTTTTTAAATAAAAACAATTCCCAAAGGCCTGGAAATTCAG GAACATAATTCAAAATAATTTATGGATCAAAAAATAAATCATATAAAGATCTGAGAACTA CAATGTAAAAATATAGAAAAAAGTCATAACAATATTAGANAAAAATTTGAGCTGGATAAC AAAAATAGTACCTCNGCCNCGACCACNCTAAGGGCGAATTCCAGCACACTGGCNGN Sequence 1049

CCCTTCGAGCGGCCGCCCGGGCAGGTACCTATAAACAAAGGCATCATAAATAGATATAA AGCCAGAAGAAAAGGGATCTAAAGTAGACAGAGAAGATAGGCTGACTCTCCAGTTGCAGA TTTCATTATCAGCTCATCACACCACCGAAACTCTCTGGTGATTTGCTATCCACATCCAT GGCGTTTGGTGGCCCTAAAGATTGTAACGGCCCCCATCCTCTTGGTTAAAATGGCAGGTG TGTTGACAAGAACTGTCTTAGGTACCTCG

Sequence 1050

CCCTTTCGAGCGGCCGCCCGGGCAGGTACCTCTCATCTCCAAATCACTAGACTCTTATG
TTAAGAATACTAACAAGAAAAAATCCAAACCCCCAATAGAAAAATCCCCAACAACACAT
ATACCCTTAAACACAAGAATTGTATTATTCAATGAAAGCAATACAAGTAAACACAACAGT
TACCTTGGCTATTTTTTCAATGTACCTCGGCCGCGACCACGCTAAGGG
Sequence 1051

Sequence 1052

CCCTTCGAGCGGCCCCGGGCAGGTACGCGGGTATAGCTATATACTCATATTTTTATT
TTTATGTAAAATTTCCAAAATGCTTAATATGGCAGTATAATAATTATAACTAGATTTACT
TCAAAACATAGACATAAAGAAGATTACATGCCTGTAGAAGTTCATTGAATTAGGAATCAC
ATGCTATTTATTTTAGCAGATATCTTCTTAATTAAATGTTTGACCCATGTGAAGTCATTT
AACAGATCTGTTACGCATTATTCACATATGCAAAATAATCTATATGATCTGAATACCATT
TCCATCTTTAAAATTACATATTCC

Sequence 1053

Sequence 1054

CCCTTCGAGCGGCCGCCCGGGCAGGTACAATGAAAATTACAAAATACTGTTGAGAGAAAT TAAAGAAGACAAATAAATGAAAAGAGACGGAACATGTTTTCGCTTGTAAAACTCAGTAGG ATTAAGATCTCTTCTCCCCACGACTCTATAGCTTTAAAGCAATCAAAATCANACTGGTT TTGTCTGAACGTTTTTGAATAAGTCAATGGCTTATTTCAAAATTCATATGAAATTTCAAA TGCCAAAGANTAGGCAAAATATTTCAGAAAAGAAGAAGATTGAGGATTTGCAATAACCT GACTTCAAAACTCACTAGAAGAACGAGGCCAGACTGCCCAGGGG

Sequence 1055

Sequence 1056

CCCTTTCGAGCGGCCGCCCGGGCAGGTACATTAACTCACTGACTTACTCTGGGTTGCTAT
TGTATTAAAATTCTGTATAGACATTACGTAGCCTCAGAGTTGAATTTGGACTGCCCTTAA
AATAAAAAATTCTTAAATCTTTAGTGTGGTGTCTATTAATTTTTATGATGATTTACAAGT
TGGAAATGATTACTTTGCAAGTCATAGTTTACTTTGAAGTTAATAAAAAATTCGGAAAACGATA
AAGGAAAAATGCCATATATGGCATTGTTCTTAACAGCTTATGAAATTTGGAAAACGATAT
TTTAGAAAGCTTTCTCTTGNTGGCTGGAATGAAGTGGAGACCCTGCT

Sequence 1057

CCCTTCGAGCGGCCGCCCGGGCAGGTACAGCTTGTTCAGGATATTTCTTCTATTTTTCCT
TTGAGTTCTTGTTCATATTCTAGTTAATTTCTAGTAGTTCTTAATGTATTTTAACCAATA
GACTTTTGTCTTCCTTCTGCTTATGTATTCCTCGTAAATGCTTTTTGTGACTTGTCTAAG
TATAAACAACTTTACTATTAGCTGTAAAATTTTCATTTTTAGTATGTCATCAATCTTTTT
TTGTGNTTTAGTATGATTAAATGGTTTTTCACTTGGAAAGATATTGAATAGTCTACTTCA
TTGATTTTTTTTTAAAGTCATTTTCATTTTTT

Sequence 1058

Sequence 1059

Sequence 1060

CCCTTCGAGCGGCCGCCCGGGCAGGTACAGTTACCAAAACCCATCCAACTAAAAATTTAA GCTTTTTGCATTTTAGTGGATGCAAATTGTGTCTTAGTAAGAAGAACATACAAAAACTAA GAAAGATAATGTTGAAGAAAATAACAAAGCTTAAGGACTTAAACTATTACCATCAAGACA TGTATAACTACAGTAATTTTAAAAACTGTTTTCTTGCATAAGTATAGAGAAATGTACCTC GGCCGCGACCACGCTAAGGG

Sequence 1061

CCCTTAGCGTGGTCGCGGCCCGAGGTACTTACGCTTTATGATCTTGAATATTTTCAGNGT NTAAGGAATCTCTTCCTTCTTTGATCTCCACTGCATGAAGAACTCTGTTGCAGGTGTTAA CAAGGAAGTTTTGAAATACAAAGCCAGAACCTGCCCCCCAAAGATCTGACAGTAGTANAA GGAGATCCATTTTGAAGAAGGTATAATGGCAACC

Sequence 1062

CCCTTAGCGTGGTCGCGGCCCGAGGTACTTTAACAAATTAAAAACAAATTTTAATTTAAA ATATTTTAGAAATTTTACTTAATACATTTATTTAATGAAGGCTGCTTTTAAGAACTTTAA ATCCTCACGTAAACACCACCACCTGCAAAGTATTAATATCAACTTTTTCAACAAAATGCC TGCTATGTATAAGCTACTGAAAGAAGACAAAAATTAATAAAATGTGTCCCTCCTCTTAGA TATCTATAATCTANGAAAATGAACA

Sequence 1063

Sequence 1064

Sequence 1065

CCCTTAGCGTGGTCGCGGCCGAGGTACATTGAAACAATATAGTAGTCTTCCCCTTTACAA
AGCTGAATTAAAGTAAAAGTGTGTGTGGGAATAATAGGGGAATGTGGATTGTAGCTGTT
TAATAAAGATTTAGATACATATAAAATTGCTTAAGGCCAGGCGCTGTGGCTTACGCCTAT
AATCCCAGCACTTTGGGAGGCTGANGTGGGTGGATCACCTGAGATCAGGAGTTCGAGACC
ACCCTGTTCAACATGGTGAAACCCCATCTGTACCTGCCCGGCGGCCGCTCGAAAGG
Sequence 1066

Sequence 1067

CCCTTAGCGGCCGCCGGGCAGGTACCCTCCGTGACTTTTCAGGGTCTCCTGGTTGAATG
AATTTGCANAAGGATTAAAATGTGTGTTCTTATTTGTGCTTTGTATTCTCCCATAANTAG
TGTGTTGGAGGCTATTAGAATAGCTGAGAGGGTAAAACATAAACACATACGTANGAGCCT

GACATAAACACATAGGTAGGAGCCTGCCATAAGCACCGTAGGTAAGAACTAAAAGGGTGT GTTTCCATTTCANGNGGTCCAGNCCTTCCTTNCATACTCTNAGATGACAAAAACACAAAG TTGCTGGAGCTCACACAACTAATGACTAAANCCAGAAAGTTTGGACATGGAGAAACATTT

Sequence 1068

CCCTTAGCGTGGTCGCGGCCCGAGGTACTATATTAGTGTAGCAATTTTCCAAAAGCCATT
CATCTTAGAGGGCTAAATGATTTTACCTTATCAATTCCTCCTGTGAAAAAAATATCTCTAA
AGAGGTTTTCTGCTGGAAAATATTGTTGCTGTCACATTGATATGCCAACAAAAGCTAAGC
AGGGAAGTCAGGCCAAGAAATATCTNCCTGCAAGAGAAGGCATCGCACATGTATCTCTCC
ATGCTATTTAAAATTTGCATTCTGCAACATAGAAGGGATAGGCCATGCTGCAGAAGCCAG
GTCCAGGAAAACTGCTTTCTTTGGCCNTTACACATCCTTTTTTGGAGAAGATGCTGGTGAA
AGCAGCAACTACCATCTGCTCCTGTTGACTTAAGTGCAACAGGTGGAAGGGANGAAGGA
AGGGCATCGCAAACATCATTCTATTATCTCAACCTTGCTTTTCTCGG

Sequence 1069
CCCTTAGCGTGGTCGCGGCCGAGGTACCCTGCTTTGATTATTTCCGAATCCAGTGGGTAG
AGAAGGTAAAGGCAAGGGCTCACTGGATATTTTTAAATTGTAGGGATGTCCTTTGCTCTG
GGTCAATTTTAGGATCAAATATAAAAGCACCTATAGCTCAGAGTATCTTCTAACATAAAA
CTTCTGAGATACCAGAAATTTTCCAAAACATGGTATAAACAGTATGAAACACTGGGTAGA
TAAAAGCTTTCTCTAAATCTTAAAGTGCTCAAATATCATGACCTGATTTTTTAGTTTTAG
AAATCAGATATTTTTCTATTCCATATCTTAAACTTTCATGTTAAATTCTAGTTCTGACAA
TGTAGGGTTCTATTTTTTCAGGTGATTGTTGGGGAGCGTATAGAAGCATATATAAATATG
GAATATGTGTTTCTTTTTTCCCCTTCTGAAAGAAAGTCAAGCCTCTAATCAAATAGATTG
ATGCTTCAGAAACTTAACAGAATATTATCTGCAATTTGGCATAAATGCATTTTTCTTGGG
GAAGTTTCCATGGTCAAAATTATTAGTCATTGCAAAACAGAAAAGTTTGACACCTTGGAAA
TGCAGACCCTTTTGCTT

Sequence 1070

CCCTTTGAGCGGCCGCCCGGGCAGGTACATTATATTAATGAAATTTATCTAGTCCTTGCA
AACTTGTGCCTATTGATTTTCATTAGTGTAAACTAAAGAGAGAAACTTCACACTGACATT
TATAATTGTAAGAACTAAGAACCAACCATCAGCTTTTCTATGCCAATCCATGCCCTTCAG
GAAGTTCTTGAGGCCTTGAGGTTGCTAGTTTAGTAAATTGCTTACTGGGACATTAAAGCA
GCTACATTTTTTGGAAAGANGGAGAATTAAGTTTTTGGTG

Sequence 1071

Sequence 1073

Sequence 1074

CCCTTAGCGTGGTCGCGGCCGAGGTACTGGGTCACTCTGCCCCAGCTCTCCAAAGGCATC
AAGATCCGACTGCTAGGAGCCCCGGCTTCTTCCCTGACCTGCCCGTCTCCTACACCCTCT
GGTCCTGCTCCACACTGGTCTAATAACTGGTGTTCCACATTCCTCTAACGTGCACAACAC
AGTCCTGCCCCGTGCTTTTCACCTCCTGTCCATTCCTCTTATAACG

Sequence 1075

Sequence 1077

Sequence 1078

CCCTTAGCGTGGTCGCGGCCCGAGGTACAGCTCACATTCATGGGGAGGAAAATCAGGGCC TGTCTTTAGATAGGAGATGTATCAAAGAATTTGTGGACATATTTTAAAATCACAGCACTA CTCTTGATGTACCTGCCCGGGCGGCCCGCTCGAAAGGG

Sequence 1080

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### Table 1

Sequence 1081

CCCTTAGCGTGGTCGCGGCCGAGGTACACCGATGTGGCTGACATTTGGCTGGAGTCTGCT
AAGATGTTTTCTTATNCTGGATGGACGCAGACCTGTAACACCCTGTTTTTCATCTTCTCC
ACCATATTTTTCATCAGCCGCCTCATTGTTTTTCCTTTCTGGATTTTATATGGCACGCTG
ATCTTGCCTATGTATCACCTCGAGCCTTTCTTTTCATACATCTTCCTCAACCTACAGCTC
ATGATCTTGCANGTCCTTCACCTTTACTGGGGTTATTACATCTTGAAGATGCTCAACAAG
ATGTATATTCATGAAGAGCATTCCAGGATGTGAANGAGTGATGACCAAGGATTATGAAAA
GGAAGAGGAAGAAGGANNAAGAAAGAAG

Sequence 1082

Sequence 1083

Sequence 1084

Sequence 1085

CGGCCCGCAGTGTGATGGGATATCTGCAGAATTCGCCCTTAGCGTGGTCGCGGCCGAGG
TACCACCTAACAAATTGGAGGAAATGAAAAGACGAATCAACAACATTTTGGAGAAAAAAAT
TTATTCTACTTCTAGAATTTCATTACTACAAGTGCTTAGTTCTTGGTTTGGTAGATGAAG
TGAAATCAAAATTGGATATTTGGAACATTAAATATGGGAGCAGAGAATCTGTGGAATTAT
TGCTGGAAGACTGGCATAAATTTATTGAAGAAAAAGAATTCCTAGCTCGACTTGATACTT
CTTTTCAAAAATGTGGAGAAATTTATAAGAATTTGGCTGGAGAATGTCAGAATATTAATA
AACAGTATATGATGGTGAAATCTGATGTTTGTATGTATAGAAAAAATATATAATGTGA
AGTCCACTCTACAAAAAGTGCTGGCATGTTGGGCTACTTATGTGGAAAACCTTCGCTTAC
TAAGGGCTTGCTTTGAGGAGACCAAGAAAGGAAGAAAATTAAAGAGGTACCTGNCCCGGGC
GGGNCCGNTCTAAAAGGGC

Sequence 1086

Sequence 1087

Sequence 1088

CCCTTNCNAGCGGCCGCCCGGGCAGGTACATCCTTTTGCATGCTCAAGAGCCCATTCTTT
TCATCATTCGGAAGCAACAGCGGCAGTCCCCTGCCCAAGTTATCCCACTAGCTGATTGCT
ATATCATTGCTGGAGTGATCTATCAGGCACCAGACTTGGGATCAAGTTATAAACTCTAGA
GTGGTAAGTGTCTTCACATTCTTTAAGCACTAAAGAAAACTTTTAATTAGCTACCTTGCT
TCCAGTAATCAAACTAGAGCTCCTCTGCCTTGTGTAAGTTGCTATAAAGTATTGACTATT
AGAATGTCTTGAACTTTGGTTACTGTGAGCCAAGTCGGTGCTCAAAGTATATTTCATAGT
CTCAATTATATAGTAATTTAAGTTCTGAAAAAATAGGTTCTGGCTTTGCTATGGAAATATT
TTGNGAGTATTTACTTTGGAA

Sequence 1089

Sequence 1090

Sequence 1091

CCCTTAGCGTGGTCGCGGCCGAGGTACCTTTGCAGTTTTCTAAGGGCTCTTAGTGCTTTT AACTAGAAAGGGGTTTTTCGTTTGTTTGTTTTAAAAGGGTCCTTAGTGCCTCTTAC TCCCTTCCTGTAAAATCCTGTGTAAAATGACAAAAGTGCACAATTGATCATTGTAAGTTC TAGTACCTGCCCGGGCGGCCGCTCGAAAGGG

Sequence 1092

Sequence 1093

CCCTTAGCGTGGTCGCGGCCGAGGTACCAGGTCACCTGTATCTTGATCACCAGAGAGCAC
ACCAGCCTGGACAGCACCATACGCTACAGCTTCATCTGGGTTTATGCCACGGGATGG
TTCCTTGCCATTGAAGAACTCTTTAACCAGTTGCTGAATCTTTGGAATTCGAGTCGAGCC
ACCAACAAGAACAATTTCATCAACCCGCGTACATGCTAAGACTTCACCAGTCAAAGCGAA
CTACTATACTCAATTGATCCAATAACTTGACCAACGGAACAAGTTACCCTAGGGATAACA
GCGCAATCCTATTCTAGAGTCC

Sequence 1094

CCCTTTCGAGCGGCCGCCCGGGCAGGTACATGCCAAAGACTTCGCCATAACTTTTCAAGT
TAATTACACCTGCTACTGTTTCACTTAGTGGCACTTTGCTTAACCTGTTATACACAGAAG
GGGTTGAGAAGACAAAACACTGTTAACTTCATTATACCTTTGACAAAGTAATATTATGTG
ACATGATGTTTTTCCCCAAAATATTAGAGCTGCAGATTTAGCTGATTCAATTTATGGGA
CAATTTGTTATGTGATCTAACAATTTGGCATATAATCTAGAAAGCAGCTTTATGATCAAA
AATTGATTTTATATATATATACATATAAAT

Sequence 1095

Sequence 1097

Sequence 1098

Sequence 1099

CCCTTTCGAGCGGCCGCCGGGCAGGTACGCGGGGGAGGTCTCCATTCAGTAGGTGGCCC GGGATGAAGGCCGTGTTGGGGCTAAACCACACTCTGGAATTCTGTCAGCAAATTCCTCGC TGTGTGAACTTGAGCAAGCCATTCACCTTTCTTAAGCCATTTTCTTGATATTTCACAGAG CCTCACCAAGTATTCAACGAGAACATGTAAGTGAAATGCTTCACAAAATGCCTGGTAAAT AATAGATGCTTAGAAAATGGTAGAGAGAGAAAAGAGCAGTCTCTGCCCTTTAATGTACCT CGGCCGCGACCACGCTAAG

Sequence 1100

GGGGNCCCGGGGAAAAATNATTTTGGGGGGGGGGGGCCCCCCCCTTTNCCTTTNANNA NNTTAAAGGCCCCNNTTGGGNCCCTTTCCCGGGAANGGCCCGGGGGGCCCCCCGGCC

CCCAGGTTNGGTTTGGGANTGGGGGNANTTANTTTCTTTGGCCAAGGAAAATTTTCCCGCCCCCCTTTTTTTCCGGAAGGCCGGGGGCCCCGGCCCCCG

Sequence 1101

CCCTTAGCGTGGTCGCGGCCCGAGGTACTTGTTGGCTAGGAGCTGAGCTTATCACAACAA
ACAACAGCATTACAGGAATTGTCTTATATGTGGTCAGTTGTAAAGCTGATAAAAATTATT
CTGTAAATCTTGAAAACCTAAAAAATTTACGCAAGAAAAGACATCACTTGTCTACTGTAA
CATCCAAAGGCTTTGCCCAGTATGAGCTCTTTAAGTCCTCTGCCTTGGATGATACAATCA
CAGCATCACAAACTGCGATCGCTTTGGATATTTCCTGGAGTCCTGTGGATGAGATTCTTC
AAATCCCTCCACTCTCTTCAACTGCAACTCTGAATATTAAAGTGGAATCAGGAGAGCCCA
GAGGTCCTTTGAATCATCTCTACAGAGAACTGAAATTTCTTCTTGTTTTGGCTGATGGTT
TGAGGACTGGTGTCACTGAATGGCTCGAGCCCCTGGAAGCCAAAATCTGCTGTTGAACCTT
GTCAGGAATTTCTGAATGACTTAAATAAGCTGGATGGGATTTGGTGATTCT
Sequence 1102

CCCTTAGCGTGGTCGCGGCCGAGGTACTTTGTTAGCGTCTGCGTGTGTATGGAAAGTTGA CAAAAAATGGCATGAAAAGATCATGATTGGATTTTCTTTTAAACCTGCCCTTCTGTAAAA AATAGTTTATATATTTTTAAATTAGTAGGTATGTGTGGCTTCCTTTTTTCCTAACATTCC

Sequence 1104

CCCTTTCGAGCGGNCGNCCGGGCAGGTCACTATAGGGCTCGAGCGGCCGGCCCGGGCAGG

Sequence 1105

Sequence 1106

CCCAATTGGGCCTTTNGATGCTGCTCGAGCGCGCGCAGTGTGATGGATTCTGCAGAATTCG CCCTTAGCGTGGTCGNNTTNGAGGTACNACCTGCATGGTGTTTATGCACACAGAGATTTG AGAACCATTGTTCTGAATGCTGCTTCCATTTGACAAAGTGCGTGATAATTTTTTGAAAAGA GAAGCAAACAATGGCGTCTCTTTTTATGTTCAAGCTTATAATGAAANTCTGTTTGTTGAC TTATTAGGACTTTGAATTATTTCTTTATTAACCCTCTGAGTTTTTGNATGTATTATTAAT AA

Sequence 1107

GATATCTGCAGNNNTTCGCCCTTTCGAGCGGTCGNCCGGGCAGNTTCNTGAGATGTTACA CTAGTATTTTGAAAAAGTATAAAAATGTGGCCGGNCGTGGTGACACATGCCTGTAATCTC AGCCACTTGGGGAGGCCAAGGGCANGGAGAATCGCTTGGAACCTGGGAGGCGGAGGTT

Sequence 1108

Sequence 1109

AAAAAACAAGGGCTGGGTGCAGTGGCTCANGCCTATAATCCCACACTTTGGGAGGCCGAN GCAGGAGGATTGCTTAAGCCCAGGAGTTTGGGATCAGACTGGACAACAAAGTGAGACCCC TATNCCTATCTTNTNCNAAAATTTTAAAAATTAGCTGGGCCCAGTGGTGGTGGTGCCTGT AGCCCCAGCTACTTANGANGCTTAAATGGGGAGGATCCCTTGAGTNCAGGANTTTGAAAA TTGCNTGAGCCTTTGATCAAAACTTTACTTTAACCCTGGGGTGGACCANAACCAANGGGG TTTTAAAAAAAAAAAAAAGGGAAAAAAAAAANANAAAANGGGGAGGTTTCCCCCTTGGGCC CCCCGGGGGGNCCGGGGCCCCNGGNTTTTTTTTGAAA

Sequence 1110
CCCTTAGCGTGGTCGCGGCCGAGGTACTGGGATTACAGGCGTGAGCCACCGCACCCAGCC
AAAACTGAATGCTTTTAAGAGCACCCAAGTCAACTCTTGAGTGCTTTTGCTGCTTATAAAT
TTATTCCACCAGATACCCTANATCATCTCTCTCAAGTTCGAAGTTCCACAGATCTCTAGA
GCAGGGGCAGAATGCTCCCAGTCTCTTTGCTAAAGCATAGCAAAAATCACCTTTGCTGCT
CCAGTTCCCAATAAGTTCCTCATCTCTGTTGGAGACCACCTCAACCTGGACTTCATTGCC
ATATCAAGATCGGCATTTTGGCAAAGCCATTCAGCAAGTCTCTAGGAAGTTGCAAACTTT
CCCACATTTTCCTGTCTTCTTCTGCACCCTTCAAACTATTTCAACCTCTTCCTGGTACCT
AAGTTCCAAAAGGTACTCCACATTTTCAGGTATGGTTACAGGAAGCAACCCGNTTNTACCG
GTACCTGCCCNGGGCGGCGNTCGAAGGGCGAATTCCAACACACCTGGGCGGCGTTACTA

GCGCTNGTGTTTCAATCCCTTACGCNCCGCAGCCNTGNTGATGGTCTAACCAAATTCTAG
TNCCTGCTACAATGGGATGGCCTGGGGGATTAATGGAACTTTGCCGGGACCAACTTATGA
TAAGTGGGAAAGCACTTTAGGGCTGATCCCATATANGTGGTGAACACTGCACTTNTGGCC
AAATGGACACGGAGGATAANCACCATNTGACACTGGGGGTGGTNCAGTTGGAGCTCTGGA
AGGAAAAGNCTTCCTGGGGTGGATCTCTAACAATATTAATACCTCNGCCGCACCCGCTAA
GGCGAATTCCAGCACACTTGCCGGCCGTTACTAGTGGATCGAGCTCGGTACCAAGCTTGG

CCCTTAGCGTGGTCGCGGCCGAGGTACCACANGGACCCAAGGACCTCTAGCTGTTTTGG
TGAGGCAGGTCTTTGTCAATTTAAGTAATCCTGTCAGATGGTGTACCAATCTTGTAACTC
ACGACAAAGCACTGTTGCTGAGATACTGTGATTTATTTTCCTTAATGGGCAGTTTTTTTA
TATATATACGTTCCATTTTCAGACAGGTGGTGCTTTGAGTTGAATTTGCAAGTTCAAGTG
AAACATGGATCTCTTTTTTATTTAACTCCCTTTTCTTCTNCTAAGGTGCTTAATTTCCAT
GCTTGACATCGTACCTGCCCGGGCGGCCGNTCGAAAGGGCGAA

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### Table 1

Sequence 1115

GTÁCAGAAGGGTTTCACCATGTTCACCACACTGGTCTCAAACTCCTGGTCTCAAGTGATC CATCTGCCTCAGCCTCCAAAGCACTAGGATTACAGACTTGAGCCACCGCACCCTGTCCC ATCACTTTATATTTTCAAGAAGGTGGTGAGGGTGTTGGTGCCTGGGGTCTCTAGCTGA AGAAAAGGGAAATTTTTCTATCTCTGGTAATGTCTTTATGGATATAAACCTCAGTTAACT GGAATAGCTATGGAATGTATGCTTCTGGTTAACTAAAAATTAACCAGTAAACACTCTGTA NTAACCATTACAGAAAATACTTCTGCTTTAAAAAAGTACCTGCCCNGGCGGGCCGCTCGA **AAAGGG** 

Sequence 1116

TNTCTGCANAATTCGCCCTTAGCGTGGTCGCGGCCCGANGTACCATCCCAAGGACACAAG TTTCCAGGCAGCCTNCAAGAATTTTGTTAGAGATGTCCCATCACTTATGGCCTACAC TGTTACATCTGGACTCTGGATTGCAAGTGTAAGGAAGAGAAAGTGAAAATGAAAGAGAAAGT GGAACAAATATTGGCAACAGAGCCCCCAGAGGACAGTTGTCCCTTTTCCAACAAGTTAAG TGGAAAATGCTGTTGCCATGGGAGTACCTGCCCGGGCGGCCGCTCGAAAGGG Sequence 1117

ANCCTTGGAAAAATGGNNTTTTAAAAAATNAAAAAAANANTTTTCAAANCNNNAAAAN NANNACCNCCTTTTTNAAAAATAAAAAAAAANNCCCCCGGGGGGCNTNAAAAAACCTT TTTTTTTAANTTTTTTTAAAAAACCCNCCCCNCNNCCATTTTTAAAAGNGGTTCTNTTTT NAAAAAAAAATAAANATTGGTTTTTTAAAAAAAAAATTCCCCCCCCNATTTTTTAAAAAN GGGGGGGGGTTTTTTTTTTTNNCCCC

Sequence 1118

AAGTTGGCCCAGCCCCAGGGAATAAATTTTGACTGTCTAAACAACCACAGACCAAGGGCC AAATCTGGCCCTCTGACTGTATAAATTAAGTTTTACTGGAATAAAACCAGGTCCATTGAT TTATCCATTGTCTACATACNCTTTTAGGCTCGATGGCNCCACTGTGTCCTACAAAANANG TTATCTAGACAAAAGCCTAAAATATTACCGTTTGCTCTTTATNGAAAAAGTTTGCCATT CCCTANTCTAAGGGTTANATTCTGACTTATCATGTTATCCTACCCCCCCCCGNGTACCTG CCCGGGCGGCCGTTTNAAAGGG

Sequence 1119

CGCCAGTGTGATGGGATATCTGCAGAATTCGCCCTTTCGAGCGGCCGCCCGGGCAGGTAC AATATGGAAAGGTAAGATCCATACCCAAAGTTAGGTAACTGTTTGAGTTGCCCATGTAAA TAGTTTAAACACTGTAGAAGTATTANAGAGATCCTTAGGGAATGATGCAAGTGGCATTTG AGCTATTCATTTANAGAAAAAGTTTAAAAACATGCNGTCTAAAANGGAAGAGATNGAGGC CATTNGAAAAATNTTCTTAAGATTAACAGCTGGTTATCCCACTGGCTAACTTCGGATGG TGNGGCANAAAGCACCGTNTTGGCTAAACAAAGNGGGAATGGCGTTTAAAAAAATAGGAAA GGGCAAGGCTAAANATTTTGAACTTAATCCTACTTGGGTGCAGGGAATAACATAGCTTAT TCTTCATGAAAGTNTTTTTNTTCACACTACCTAAACAGNTTATACATTTGCTTTTATCTG TTTNTNTTTNGGGGGTTGCCAAAAAAAAAA

Sequence 1120

CCCTTAGCGTGGTCGCGGCCCGAGGTACACACATCTTTTTGAGATCCTACCTTCAGTTCT TTTGAGTATATAGCCAGAAGTGGTATTACTAAATCTTACGATATTTCTATTTTTAATTTA TTGAGGAACCACTGTAGTTTTTCATAGCAGCTGCACCATTTTACGTTCTCACCAAGAGTG CACAAGGGTTCCGAGGTTCCCACATCCTCCCCAACACTTGTTATTTTCTGCTTTTTTTAG ATTGCAGCCATCATAGTGGGTGTGAGGTGACATTTCATTGNGGTTTTGATTTGCATTTCC CTAATGAGGAGTGATGCTGAGCATCTTTTCATATGCTTACTGGTCATTTGTATGTTGTCT TTGGAAAAATGTCTATTCAAGTCCTTTGACTATTTTAAAAATTGGGTTATTAGAAGTTAT CGTTGGTGNTGACTTGTAGGAGTTNCTTTCTATATTCTGGATATTAATCCCCCTATCAGA TATATGATTTGCAAAAATCTTCTCTTAATTCCATAAGGGTACCTTTTTCACTTTTGTGAA TGGGGTCTTTGATGNATAGAAAGNTTTTANGNTTTGAAANANCTAAATTATCNGGTTTTA

CTTTTGGGGGGGCTGGG

Sequence 1121

Sequence 1122

Sequence 1123

Sequence 1124

CCCTTTCGANCGCCGCCCGGGCAGGACGCGGGTAGGGCAACTTGGATGTATGCTTAGGG
TTCGCAAAAAGTAAACAAAAATACAAGGGAAAAAAATTATTGACAATGAACTGCTTTGGT
AGTGATTTGTGTTTTTTCTTGATTAGTAACCAACAGCACAGCCACCAAGAAATT
ATGCACATGTGGGACCACGTCAAGCTGAAGCGTTTGTGCCCAACAAAGGAAACAATAAAG
AAAATAAAAAGGCACACTAAAAATTACAAGTTTGGGATAAGGGATTATTTTTGAAAAGGT
ACCTCGGCCGCGACCACGCTAAGGG

Sequence 1125

Sequence 1126

Sequence 1127

182

### Table 1

TTGGCTCAGTGCATGTCACCAAAAATTCTCCAGGGATTTCATAGTCTCGGTGGTGTGGCT GGCCCAGGACTATCCATGCAGGGAGGCCTGCACCTNTGACAGTCGGCTGCANCTGGGGGT GCCCATCTTNTGTGCTCTGTGGTACTNCTACACCACATAAATTCAGGAAATGACTAGATGA GCCTGAGTTGGCTTTANTATTAATGTGCAAATACAGTTTTCTATACCAACAAACCC Sequence 1128

CCCTTTCNNTNNTGCCGCCCGGGCAGGTACTATCGATTGGGTCGGGGGTGATCTATTATC
ATTGAGTAGGAAACTTACTAGGNTAAATAGAAAGTATATANAATGTATTTGGTTATAGA
TATGTGAAGGAAAAGGCATANTTATATGGTCATCCATGCTGGGGAATATTTNGNAGNTNT
NTTTTGTTGAGAGAAATNGNNCATNTTGGATCAATAGNATTAGACAAATATCTTGNGCAT
CAAGAGACCTGGAAACATG

Sequence 1129

Sequence 1131

Sequence 1132

GATATCTGCAGAATTCGCCCTTTCGAGCGCCCCCGGGCAGGTACATCACATGGTGAAA
GCAGGAGCAAGAGGGATAGAGGTGCCATACACTTTTAAACAATCCGATCTCACAAGAGCT
CACTCACTATTGCAAAGATAACTCCAAGCCGTGAGTGATTGGCTCCCATGACCTGAACAC
CTCCCACCAGGTCCTACCTTCAGCATTGGGGGTGACAAAGCAACATGAGATTTGGGCAGG
GATAAATATCCAAATTATATCATTCTGCTCCTGGCCTCTCCCAAATCTCATGTCTTCTCA
CATTGCAAAATATAATTATGCCTTCCTAACAGTCCCCAAAAGTCTTAACTCATTCCGACT
TTAACTCAAAAATTCAAAGTTGGCCAGATGCAGTGGCTCACACCTATAATCCCAGCATTT
TGG

Sequence 1133

GATATCTGCAGAATTCGCCCTTAGCGTGGTCGCGGCCCGAGGTACTGAAACTACAGGTGT
GAGCCACCATGCCTGGCTTAAACATTTGTTTTTAATTAGCCAGGCTTGGTGGCACACATC
TGTAGTCCCACCTACTCAGGAAGCTGAGGTGAGAGGATCACTTGAGCCCAGAAGTTCAAA
GGGGCAGTGATCACTCCATTGCACTCCAGCCTGGGTAACAGAGTGAGACCCTGTCTCGCC
AAAAGAAAGAAGAGGTTAAGGAGGAGAAGACTCTAACCAAAAGAAGTAACTGATATTATTGA
AAATTATTTGATAGCAATCGCAATTATTTTGGATAACTATTTTTACATATTGTAAGCCAA
CCAAATAGGGTCTTAAAAAGTTTCAAGACCAAATGATTCATGTTCTCTACTTCAGCCTAA
AAAAAAGTTAAAGAATTCTTCAATTACCAAAAGAACAGTTATTCTATANTTACAAAAAGA
CTTGAAACTTTTCACCTGAATGCATCTCTTTGTTACAAAACCTTTAAAGGAGGTAGGGGG
GAACTTCATTGATTCATCAATGCTGNCTGGTTTTTTAAACCCA
Sequence 1134

AAAAAGTCAGTATGTAATATAGTTGCTCTTTTATTTAAAAAAATTTTAAGATTGATATTTG CTTACTATCATGTTACGAGGCTTTATTTATATGTGTATTACAAATATATTTGTTAACTAC TAGCAAATATTTTATGTAATAACTTCGCTATTTTATTAAAATCCTGTTTTTAAAATTCTG AAATGTCATTTTAAGTATAGGAGACAGGTGAAATTGTTCAAGGTTACTACAAACCAGGG AATAAGGGAAGCTTAGATTCTTGGNCTTTTTTCAAAAAAAGAAAAATTTTA

Sequence 1135

CATGCTCGAGCGCCCGCCAGTGTGATGGGATATCTGCAGAATTCGCCCTTAGCGTGGTC
GCGCCCGAGGTACAGAGGAAATGGGACTTTGCAATTATATTTTTCTAAGTGGTCTGAAC
TTGGTCTCACTACCCACATCACCTGGAATGGTTACCAGGCCTCAAAGGACTGCCCCACGG
GCTAAACAGCTGATCCGCTCTCTGAAGCCAGACAGTCTTATCTGGGAGGTCCTTTACAGA
TGCCACTGTTGAGGCCCGAAGCTGAANAAAAGTGACTCCATCCTCAAGTAGTCCTTATC
TTCCTTTTGAACCAAGCCTTGCTGTTCTNGGGCCGCATTTGTGAATTTGGNCTGGAAGTN
NNNGGTTCTTTAAAAANAAAGNGATGGGTCCTTTTAAGGTAATTGAAATAAGGTGTTTG
ATGGTGTTAATTGGGTGATGATGTACCTNGNGGCNGNCTGGATAAAAGC

Sequence 1136

CCCTTTCGAGCGGCCCGCCCGGGCAGGTACAGATGAAGATGTGTTAAATATCTCAGCAGA
GGAGTGTATTAGATAAATGGAATTATGATATATATGATATACAAACTTTTTTCTATTTAA
AAATATTAATGGATCAACTTTAAAATTGTTAGTTGCCAGTGATCTTTTTTGGAAAACA
AAAATGGGGCATTTGTTGATTTATTTTCTGTCCTCTAATTAGTTACCTCAGTTTGAT
TGAAGCCAGTGAAGTTGTGCTTTTCCTCTACTTCTACTTCCTCTCCCCGACCTTTTTCTG
CCCAGTGTAGGGTGTATTCTTAAATTCAGACAGGGGGAGGATTCTTTCACATATNACTCA
GCTACCTCCCAATCTGGGGGAGTTTTTCTTACAACTTGATACCAGATCCATTAATTTTAC
ATTCCTGAATAAAGGCCTAGTA

Sequence 1137

CCCTTTCGAGCGGCCGCCCGGGCAGGTACAACCTTGGCTCACCGCAACCTCCGCCTCCCG
GGTTGAAGCGATTCTCCTGTCTCAGCCTCCCAGTAGCTGGGATTACAGGTGTGCACCAC
CACGTCCTGCTAATTTTTGTGTTTTTAGTAGAGATGGAGTTCACCATGTTGGCAAGACTG
GTCTTGAACTCCTGACCTCAAGTGATCCATCCGCCTTGGCCTCTCAAAGTGCTGGGATTA
CAGGCATGAGCCACCGCACCTGGCCCTGTCAGGGTTTTCTTAACATTAGCAACTGCATTT
TGATTCTGACAACTGTCACAACATTTTGGGCCAGGTAACTTTTGGTGGCTTGTGCCCTGT
AAGATTTTAGCAGCATCCCCGGCTTCTACCCACTAGATGTCAATAACATCC

Sequence 1138

Sequence 1139

Sequence 1140

ACAGAAAATGATTGAGTGACTCTTCTCAAATCTCCTTCAGGATGGTATGTGACTAGTATC
ATTCTAGATGCANAGGGGGAGAAGTTAATTTATTACAGTGGTAACCTTTAGAAGTGGTCN
CTTAAGANTGTGGGCCCTGAACCATCTGGGGAACTTGTAGCCCAGCCNGTTTCTGGGGCC
CTTATCTTAGACCTACAAAAAGAAACTTTGGGGGTTTGGG

Sequence 1141

Sequence 1142

CCCTTTCGAGCGGCCGCCCGGGCAGGTACTATTAGCAACTGTGATGATGATGATTGTGAA TCTTATTTTCATATCTTGGGTTTTCTTACAGTGAAATATTTGTTGTGTTATTTTCTTTGT AAAAATAAACCATGTTTGCATCTTGGTCTTCTTTCCATTTGGATTCAAAAGTTNTATAGT GATTCCTCCTAGTAAAATTGCATTTTCTCCCTAGGAGTACCTCGGCCGCGACCACGCTAA GGG

Sequence 1143

CCCTTTCGAGCGGCCGCCCGGGCAGGTACCTACACACATATATGCATATATGGTATAATG
TATCAATATTTACAGAGACCATAGTAAACACAGCACAAAACCAGGCATTAAGAGATGCAT
GGGAAATAGCATTTAAATGGTAAATATGGTAAAGATTGTTTTATGGTTTTTGGGTTTTT
TTTTTTAATGATCATATTTTTAATGTTACTTTAAAATAGATTAGTGGAATGTGATTCAAT

Sequence 1144

CCCTTTCGAGCGGCCGCCCGGGCAGGTACTATAAGTAGNTGGTTTGTATGANATGGTTAA
AAAGGCCAAAGATAAAAGGTTTCTTTTTTTTCCTTTTTTTGCTATGAAGTTGCTGTTTATT
TTTTNGGCCTGTTTGATGTATGTGTGAAACAATGTTGCCAACAATAAACAGGAATTTTA
TTTTGCTG

Sequence 1145

Sequence 1146

Sequence 1147

TCCAGAACCAGNNTTNCAGACTTTNTATGATAANCTAAATGTGCCANTCCTCGGCCNNTG **ACCACNCTAAGGGG** 

Sequence 1148

CCCTTAGCGGCCGCCCGGGCAGGTACTATTGAACCAACAGGATATCTTTTTTATTATTTG CATGAGTTAATCCTACAAACAAAATTAAATACCTCTTTTATAAAACATCTTTTCCAGTGT TCTAATTGATGGAGATGCGGATCACTCATCTATAAAAAATGACTTACAGCTTCAGCTTAA TCAGTTGCTATAATGTGAAAACAGGAATGTGTATTTTTTCAACTAGGTAAAAGGTGCAT ATAATTTGAATTGTTAAATGTTTTATTAATGAACAAAGTAAACCTTTTAGTAATTTTTAA ATTACTGGTCTTAGGTGTTTGAAACAAGGTAAAAGTATACATTCCAGTTTTGCCCAAAAG TCACTTAAAATATCTACAAATTATTTAATCTGTGTGTGGTAACACCATTATTGCTCCAAT TTCTGGAAAGAGTCTATTTTCAAAGTTTAAAAAAGAGGAAAAACAGCAAAGTGGCTAACC TTTGCAGTGGAAAGAAAAGTGTCCTTCATGGGTTACACTTTCATATTTTTATGCAGCAT TAAGTTATCTACCGTTATGGGGGAACTTGGGGTTT

Sequence 1149

CCCTTAGCGTGGTCGCGGCCGAGGTACCATATTGTTCTTNTTACANNTNTTACTGTCTCA **GNTATAATTTTGCAATGGCGGTTTCNCAACTNGCCTGNCCNNACCCNNNTGTNTCATAAN** TAATCTACGTAAACAAGTTAAAATAGGTAAATGNAATGTGATNAATACTTGNGGACAACC TGGTCATAATTTANAATCTCAAGGCTATATTAAATAATACATATTTCATTATTNGGGTAT TTTCCAATANAAATGTATTGGAGGAAAACCTTTCCCANAAAAAGNGTAACCTTTTTAAN **AAGGNGAATNANNNTTTGTCTAATTCAAAAGCTTATTTAAAGGTTATGTGTAAAACACGG** TNAAAGAACCNTNAAATAAAGAAAGATNTAANATAAAACGTTACCAAAAATAAAGTG

Sequence 1150

CAAAAATAATAGNGNAGAAGCTGGGCACAGTGGCTCATGCCTGTAATCCCAGCACTTTGG GAGGCCAACTCAGGAGGATTGCTTTAGGCGAGGAGTTGAANACCAGCCTGGGCAACAAAA AACAAAAAATTACCCGGGCATGGTGATGTGCCTGTAGTCCCAGCTACTTGACAGGCT GANATGGGAGGATCCCTTGAGCCCTGGAGTTCAAGGTTGCAGTGAGCCATGATCTCCCCA TTGCACTTCCANCCTGNATGCCAGAGCAAGACACAGTNTCAAANAAAAAGAAAAAACNCA ANAGAGGTGGAAGGGCTCANCAAGTGCTTTCCACATTCGCATTCCCTTAAAATCGGGAAT **GCTCTAAAGCTAGAGGACTTTTA** 

Sequence 1151

TTTTTTTTTGAGACGGAATCTTGCTCTGTCACCCAGGCTGGAGTGCAATGGTGCGGTCT CAGCTGACTGCAACCTCCGCCTCCTGGGTTCGAGATTCTCCTGCCTCANCCTCCCAAGTA GCTGGGACTACAGGCACCACCACCACCACCTGGCTAATTTTTTTGTATTTTTAGTAAAGA CGGGGTTTCACTATGTTGGCCAGGCTGGTNTCGAACTCCTGACCTCGTGATCCACCCACC TTGGCCTCCCAATCTTATTTGCTTTACAAGTCCTGCTTCAGGGTTACCTTCCCTGACCAC TGCTGCCTCCCCAACATTTCCAAGGGACTGTCATTGCCTTAAGTTATTTTTCTGTT NAGNTTTTTTTTGGCGTTTTTNTTTTTTTTNAAACAGCGTATTAATCTNTCGCCAAAG GCTTGGAAATCANTNGCCCAAATTAAAAGCNTTGTTGNAGCCTTGAACTTTCTGGGCTTA AGCAAATTCCTNTTACCTTNAGNAAANTNGNGACTACNGGGCCCATGCCCACCACGCTTG GGCCTTTAAAATTAATTTNTGGGTAACAAAAAAAAAACTTAAGCCCTANGNAAANCTTTG GTTTAAAAATNACAAGAGGGACTTNNATNTTNCATTNATACAAATGGAAAANATTAANTT TCNTCNTTANNANGANAAAGGAAAAAAAAAAAA

Sequence 1152

CCCTATCGAGCGGCCGCCCGGGCAGGTACAAGCAAGACTTTCCTTTAATATTGATAAAGA TGTATGCAACCATCCACATTTTTCTTCTGACCTTTTCCTCAAGTCTTACAACTACTTTTA ATGACTGCATTTTGGAGGTGGTCCCAGGAGAACAGATGTTTGCCTTATAATGGNGTTTTT CCATTTTTATCTTTGATTGNGCAAGGGGGTTGGAAGTATTATTTAGTCATTATATGGATT CCTCTAAAAATTGTTCAATANAATATATATTCATTTATTCACTTTACTTATTGTTTATTT ATTGCCTTAGAGTATACCCAAACACNGGAGGATTCAATAATGATCAAGACAGGTCTAATT TCTGTCCCAAANGAGCTTAAATATGNGAATTAGAAAAGGAATTTT

Sequence 1153

CCCTTAGCGTGGTCGCGGCCGAGGTACTACATAGAAAGGGCTTGGAAGTCTGATTCAGGA AAGGAAATCAGGAAAGAACAAAGGAAATGAAGGAAGAATAAAAAAGAAGAAGAAGTCATTG

# Table 1

AAAAAGTATGAAAAAATATGAAACAGATAACAAGAAAGTAGAGGAGATTCCAAAAAATAC AACCCAGGTTTTCTGCCCTCATTCTATAGAGTCTTGAGAATTGTAGGGTGTAAGAAATAA AGAATCAAGTCTGAGAGATCCCTTTTGCTTCTTTCTTGTCTCACTGATCTGGAACCCAGG TTGCCAGCTGGCTATTCACAGGCCCCGCGTACCTGCCCGGGCGGCCGCTCGAAAGGG Sequence 1154

Sequence 1155

Sequence 1156

Sequence 1157

CGGAANCANGGCATAGCNGNNCCTGGGGGAAAANGGNAN

Sequence 1159

Sequence 1160

TATTAATAGCCTACTGTTGACCGGAAGCCTTACAAACAGTTAATACACATTTTGTATGTT GNATGTATTATATAATGTACCTGCCGGGCGGCCGCTCAAAGGGCGA

Sequence 1161

Sequence 1162

CCCTTAGCGTGGTCGCGGCCGAGGTACCAACCCTATTTTACAGATGGGAAAACTGAGGCT CAGAGAGGTTAAATCACTTACACAAAGCCACACATTTTGAGTGGAGAGCTGGAATGTGA ATCCAGGCAGTCTGACCCTGCAGCTTATGTGCTTAACGATACTGCCTCTCATGTGGGCAA AGGATGGCCCAGGAGAAAGGCAGGCCCAGATTCCAAATCTGGCTTGACCGTCTAAGAGGC TGAGTCTTAACCTCTCTGAGCCTTTGCTGTTTCATCTGTAAAGTGGTCCTCCTGACAGCT GCCTCCTAGGGTTGTTTTGAGGATAAAGTGAAGTAATGGAGGGCCCTTGGGATATGGTAC CTGCCCGGGCGCCGCTCAAAGGGCNAATTC

Sequence 1163
CCCTTAGCGTGGTCGCGGCCGAGGTACCTTTTTCACCCTCTGAAATTACTAAGCAGGCTG
TGGGGTGGTGCTCTGAAACTAGGTAGAAGTCCTCACCCCCCAACAAACCTTTACCAGTGG

TTTTAGCATGCAGAAGATTCTGGCCTGAACCAGTTACTACAGAGGCTGCAAAATGAT GATTTTTCATTCATTCTTTNGTAAATACCCGGTATTTTTCACAGGATGAATGTACCTGC

CCGGGCGGCCGCTCGAAAGGGCGAATTCCA

Sequence 1164

Sequence 1166

CCCTTAGCGTGGTCGCGGCCGAGGTACGCGGCAGTGGTTTTGCTCTATACCACTGAAAA
GCACTATAACATAATTGTTGNCCATGATACTGAAGCTTTTCCCCTCACTTNTAGGTTGTT
TACATTCAGAGCTCTATCAATAAGANGAATACATATTACAGTGAATTCGACAACCGCACA
AGTNGGCAGTNGGTATCCCCAACCTAATTTATCTTGGTAAATTCACCCTGTTTCCTAGTG
CTGNTGGATAAAAGAGTGTTTACTTTTTATTGCTNTTAGACAGAGTAGNCTANATAANTT
TTCAATTTATCAACATANCCTAGACTTCTGTAAGTGGAATGNTCATTAGTAACTCATCTT
TTTGTTGNTATAATTGGAAAACAGAAACGAGGCTTATTGCTATTGCAGAAATNCNAAACT
GGCAAAAGGCCNAGTATTTNTGGTATTCCATTAATATAACCAGCTTTTGAAATTTATGTG
TTTGGATTANTGCCTTCTGGGTTACCNAAGTATTGACTCTGNTTAGTTTGGCACCTTTTC
CGGNCTTAACANAAAAATNGNAATTTGGTTAATTCTCTTAAANATTNGGTNGNANCTAGT
NGANNGGAGGTNATNNCCTAGGAANTTTACNAAGAANNTTNGNNACTTGCCCNGGGCNGG
CGNTTTNAAANGGGCGNNTTCCANCAAANTTGGCGGGCGTTACTAAGTGGGNTCNCNNCC
NTCGGGACCCGAGCTTGGNCGTATTNTTGGGGAGNACCCCCTCCCNCCCCCNCNTTNTTT
TGGAATAGAAATTCCCCCCC

Sequence 1167

CCCTTAGCGTGGTCGCGGCCGAGGTACTTTTCTGTCTTCTAATTTTTAAAATTATTAATG
TCTTCTATTTTTCTAAGGCTGATTTTTCTAATGTCTGTATTTTTCCTTTTTTTCACATC
TTGACATAAGTAGAGTTCATTTATTTTCATTTATTCTTGTATAAAAAATTACTTAAGGT
TAGGAATAATTAAGTTTTGCTCCCATGTTTTTATGTGTAACAATCTCAATGTTGTATGTC
ATCTACTTCAAAATTTCAAGCTTCCCCTTTAAAATACTGTTTAAAAAAACTTTATGAAACC

AGTATTTCTCTCAACCCTTNGTGTAATACCTGGTTTTACTTTAAATGTGGTCAAGATAAT

Sequence 1168

CCCTTTCGAGCGGCCCGCCCGGGCAGGTACGCAGGGATATACAAAGGTGAAAAGAAACCT
GAAATATTTGTTGATGGCTGGAATATTTATTTTTTTTTGATCAAATAGATGAACTGCCTACC
TATTGGTCAGAATGTGGAAAAAATACAGAATCTGTTGGGCAGTTATGGTTGGGCCTTCTT
CGTTTCTACACAGAGGAATTTGATTTTAAAGAACATGTTATTAGCATCAGGAGAAAAAGT
CTGCTTACAACTTTTAAGAAACAGTGGACCTCAAAATACATTGTTATTGAAGATCCCTTT
GATTTGAATCATAATCTCGGAGCTGGATTATCAAGGAAAAATGACAAATTTTATAATGAA
GCTTTTATCAATGGTAGAAGAAGTATTTGGGATTTCCTGGTCAAGGGGATTTCAAANGAC
TACCCCTCAA

Sequence 1169

Sequence 1170

Sequence 1171

Sequence 1172

CCCTTAGCGTGGTCGCGGCCGAGGTACCAACCCTATTTTACAGATGGGAAAACTGAGGCT CAGAGAGGTTAAATCACTTACACAAAGCCACACAATTTTGAGTGGCAGAGCTGGAATGTG AATCCAGGCAGTCTGACCCTGCAGCTTATGTGCTTAACGATACTGCCTCTCATGTGGGCA AAGGATGGCCCAGGAGAAAGGCAGGCCCAGATTCCAAATCTGGCTTGACCGTCTAAGAGG CTGAGNCTTAACCTCT

Sequence 1173

CCCTTCGAGCGGCCCGGCCGGCAGGTACGAAGACAGCATCCTTCAATCCCGCCAGCTCA TGTGCATCTGAGGGTGGGGCTCTGTCTTCATGCTAGAAACCAAACTGCTCTCACAGCTTC CTGCTAAATCACCACGGCTAACGGATAAGCAGAGACGGACTACCCGCGTACCTCGGCCGC GACCACGCTAAGGG

Sequence 1174

CCCTTAGCGTGGTCGCGGCCGAGGTACAGATTGCATAATAATTTTTAGATAAATGTCAGG AACAGAATCACATTCTTAAAAGGCNGAATTTCTATAAACGTGTGTATATGTTGAACAGAT GAGCAGCTCTGCAAAGATGTGTATAACTGCATTTGAAAANGACAGTGAAAAATTTTGGGTT ACTGTAGATGTCCCACAGTCTGNCTTGGAATTTAGTTCTGTGACTAAAGGAGGCTTACAG NTGCTCCAATTTTGGTTCTGNGGGGTACCTGCCCGGGCAGCCGCTCAAGGGCGAATTCCA

Sequence 1175

CCCTTAGCGTGGTCGCGGCCGAGGTACATGGTCACAACAGATGAGCAACTGATATCACTC

ACACATGCTATTAAGAACTGTCCTGTGATAAATAACAGACAAGAAATTCAGGCATCAGAA AGCGGAGCCACAGGTAGAAGAGTTATGGACAGTCCAGAGCGTCCAGTTGTAAATGCCAAT GTCTCAGTGCCATTGATGTTCAGAGAGGAAGTGGCTGAATTCCCACAGGAAGAGTTGCCC GTTAAACTGTCTCAGGTGCCAGACCCTCCAGATAACATGAATCTGGCCAAGAATTTTCCA GCACATATTTTTGAGCCAGCTGTGTTGTTAACACCAC

Sequence 1176

Sequence 1177

Sequence 1178

Sequence 1179

Sequence 1180

Sequence 1181

CCCTTTCGAGCGGCCGCCCGGGCAGGTACTTAGGCTTTCATAAAAATACAGCAGGGCAAG AGGACCAAGATGGAGGCAGTGATCAGGGAATCTCAATGAGGGTGAGACTGCGACAAAGAC TTGAAAAAGGTGGAGAAGCAAGCCTTGTGGGTATTTAGGGTAGCAGTAGTCCAGGCAAGG GGAACAACTAGTGCAAAGGCTCTAGGAGGCAATGTGTTTGAAGTGTTTTAAGAACAGTAA GGAGGCTAGTATGGTTAGAACAGAATGAGCAAAGGGGGCCCAAAGTGGTAGAAGGTGGGA TCAAAGAGGTAATGAGCCTTTG

Sequence 1182

CCCTTAGCGTGGTCGCGGCCGAGGTTCTAATGAAAGCCAGATAAAGGGATGACGATCAC
AAGGTGAAGTCCCACANTAGGCTATCTGCAAGCTGAGGAGCAAGGACCANTCATCCAACC
TCAAATAGNANAAANGGNNNGNAAGCCCGACAGGGCAGCCTTCAGTCTGTGGCTGAAGG
CCCTAGAGCCCCTGGCGAACCACTGGTGTAAATCCAAGAGTCCAAAAGCTGAAGAACTTG
GAGTCCAATGTTTGAGGGCAGGAAGCACCCAGCACGGGAGAAAAGATGGGCCGGAAGACT
CAGCCAGTCTAGCATTTNCACATTTCCCCCGCGTACCTTGCCCNGGCCGGG
Sequence 1183

CCCTTCGAGCGGCCGGCCGGGCAGGTACTTTTCTTTTTGTGTATTACTTTTCACTTAGC

ATAATGTCCTCAGCTTCATCCATAGCAGCTTCATCCATAACTTCTGGGTGTAGCCATGG CAAGGGTAAACTGATATGGCACACTGGTGGGCATGTCTTCTGGAGAGGTGCTTCCAACTC TTCCCTGTTTTAGCTAGTCCTCAATTTGTCTGATGTCTGAACCCCACTGCCAGAGTTGAG TCTTGCCTGCTGAGTCATGTCCAGACTCCTACCTCAGAAGTATGAAGCATAACTGGTGTT ACAAACACCATCTTCAGAACA

Sequence 1184

Sequence 1185

Sequence 1186

Sequence 1187

CCCTTTCGAGCGCCCCCGGGCAGGTACTCTCAAATAACCTGTGAGTTGGGAAATTCCT CTCCTCTTGAGGTCCCAAGATGGCGTGGGGTTCCTGGGCCTGTCGGAAAGTGGCATTCTT TACTAACCACAGGTCAGGAACCCTGCACAGGAACTGTGTAGACAAGGTATGAGGCCAGTT TTCCCAAGGAACTTTTATTGGCTCCATAAGTCAAGTTTGAGTCCTTAAAGGAAAGCACAC CATTCCCATCAAAGTCCTGGTAAAACAACTAGTTTCTCTAATTGTGTCCTGTTGCAAAAG AAAACAGATTCTTATTGCACTTGTGCAAA

Sequence 1188

CCCTTTCGAGCGGCCGCCCGGGCAGGTACATATCTTACTTGATTATTTTATTTTCTATCC CACCAATCCACACCTTCACTGGAAAGTAAGTTCCATAGAGGCGGAGACTTTTGTCTATTT TGTTCAATGAACATCCCAAGCACCTAGAACAGTTTCTGACACATAAGAAGTATTCAATTA TGTGCTGGCTGAATGTATGAATTAATAAGTTGAGATTCGATCACTAGTTGAAGTATAAAT ATATATTTTTGCAAGAATAAATGCTACAGTAACTGATTATGACAGCTAATTCTGTGTACC TCGGCCGCGACCACGCTAAGGGCG

Sequence 1189

Sequence 1190

CCCTTAGCGTGGTCGCGGCCGAGGTACACCTGGTTTCACAGAAAACAAAGCAACCTCTTA AACACCAGCTCGGCAAAATGATAGGGCTTTTCCCTTCGAATTAGTCACCACAGGTGNGAA AGACAGAATGACTAATNCCATCTNGANTAAANATAGACCTTNNNAGAAATCAATNACNCT TATNTTACA

Sequence 1191

# Table 1

Sequence 1192

Sequence 1193

Sequence 1194

CCCTTAGCGTTGGTCGCCGAGGTACATATACATTATNGTAATTAAAAAGCGTGCAT GTGTATGTATTAAAAATAATAGGTATATAAACAAATACANTATNTACAATNNAAACACCT AAACGCAGAGGCTGCTGTTATC

Sequence 1195

Sequence 1196

CCCTTAGCGTGGTCGCGGCCGAGGTACTAAAGGGAAGTTGCTAGGAAATANAGCAGGTAA TTTNTCGTTAATTATGGAAACCATNGCAACACAGTAAATATTATGTCTCTNAATTTGTCT TTCAGTGNTTTTTTGGCATGANTGTNATGGAANAGTAAACAAAA

Sequence 1197

CCCTTTCGAGCGGCCGCCCGGGCAGGTACAGGAAGTGTCCGGAGGAATATATAGAAAACT GCTAGGCTTAATTCTCAGAGGGAAGATTGGGTGTTTTGGAGTGGGAAGCAAACATTTTTTA CTGTATACACTTGTACCTCGGCCGCGACCACGCTAAGGG

Sequence 1198

Sequence 1199

Sequence 1200

Sequence 1201

Sequence 1202

Sequence 1203

Sequence 1204

CCCTTAGCGTGGTCGCGGCCGAGGTACTTTTTTCCTACAAATGAGTAATTGAAGAATTTT GTTTAGCCAGACCATTTAATTCTCATCAATTGCATAATATTTCTAGTTAAATCCGAACTT CATTCTATATTAAGTAACATTTTATTCAGATCCATATCTAAATAGCAATTTTGTGAGATT TACTAAGAATTTTTCCTGGTATGTATGGTTTTGGTGTATTGGAATGTACCTGCCCGGGCG GCCGCTCAAGGGCN

Sequence 1205

Sequence 1207

Sequence 1208

CCCTTAGCGTGGTCGCGGCCGAGGTACCCATATTGCTAATGCTAGGATCAAGATACCACA TAGCCAGAACAAGAAGTTGAAGGTAAACATAGAATATTTTATACAGGCACTCACACCTGC CATTTCGGAAAAGGATTAGGAATCCAGATGCCGTGAATTTAACTATTCGTTACAGGCTTG TCCTGCAATATGCTCTGGAGCAACTTGCCTGCAGAGATTTCTGTATCCACGGACATTTAA ATATCGCAAAGGCTATCTCCAGGCAAGTATGTTCCTTTGCTTGTCATCCCCGCGTACCTG CCCGGGCGGCCGCTCGAAG

Sequence 1209

CCCTTTCGAGCGCCGCCCGGGCAGGTACGCGGGGGAGGTCTCCATTCAGTAGGTGGCCC GGGATGAAGGCCAGTGTTGNGGCTAAACCACACTCTGGAATTCTGTCAGCAAATTCCTNG CTGTGTGAACTTGAGCAAGCCATTCACCTTTCTTAAGCCATTTTCTTGATATTTCACAGA GCCTCACCAAGTATTCAACGAGAACATGTAAGTGAAATGCTTCACAAAATGCCTGGTAAA TAATAGATGCTTAGAAAATGGTAGAGAGAGAAAAGAGCAGTCTCTGCCCTTTAATGTACC TCGGCCGCGACCACGCTAAGGGCGAATTCCAG

Sequence 1210

Sequence 1211

CCCTTAGCGTGGTCGCGGCCGAGGTACTCCTGCCAAGAGGGCGACAAGTTCAAGCTGAGT

Sequence 1212

Sequence 1213

Sequence 1214

Sequence 1215

AGCGGCCGCCGGGCAGGNACAATTAATTGTGTTCTTGTGACCTGATGATTTTINGAAAA TTTGCTTTCTCTTTAAGAAATTTAAGTTTCAAGGGCCGTATTAGTTATCTAAATATTT TGGGCTAATGTTGACTTATAAATAAAAAATTTAGAAAATATATTCATGATGACAATTT TGTTACTTACACTGCCTATTCTTTATTTCTTTTTTTAGTTCAAAGGTGAAATTTTGACCTT TGTATTAACAAAGCCTCAAGAAAAGAGAAATTCTGCCTTTTAAACATTGGTTTTCCTTGC AT

Sequence 1216

CCCTTAGCGTGGTCGCGGCCGAGGTACANGGAGGAANTNAGANGTAAATNNAAACCAGAN CTGGATTACTCCGGTCTGAACTCANATCACANTAGTGACNTTAATCTGTTGAACAAACTG AAC

Sequence 1217

Sequence 1218

CCCTTAGCGTGGTCGCGGCCGAGGTACAATGTTAAAATAATCTGACTTTTCTATGATTTG GCTTTTCTGCCTTGAGTAACTATNTAAGATATCTAGCGTGATNTTNTTTNATNTGGGCTA CTTTTTAGAACAAAACANAGGTNTTTANAANAAACCACTTGCCCACANGGNCTTTTGAAC CGTTTACCTAAGTCAAGTGTAATTGAAAAACATAACCAAATGCACCANGGGGTNTATTGT NAGATAATAAAA

Sequence 1219

Sequence 1220

CCCTTAGCGTGGTCGCGGCCGAGGTACAGAATTATCAACTGATTTGGTCAGTTGCTTCCA

Sequence 1221

Sequence 1222

Sequence 1223

Sequence 1224

Sequence 1225

Sequence 1226

Sequence 1227

Sequence 1228

Sequence 1229

CCCTTTCGAGCGGCCGCCGGGCAGGCACAGAAAAAAATCTACACCAGGTAACACTGGA

# Table 1

GGATGCAGGGCTACATTTGCCACTGAAGAAACATTGTTCTCTTGCATCTGAATTCCAGTG CTTTCCAAATAGATGCGTAGATGATGAAAAATGGAGCAGCTTCTTTTATTTCTTCTTT TCCTCCTTGAATTCTAGTACTTTGTGAACTGTTGAGGTGTCCCTTCCTAAGTCACAATTC ACACTGATGCATACACTATAGTGAAACACTGGCTTTAAGAAAACTGATTAACAGAAAACC GGCAATTGTTATTTTAAA

Sequence 1230

CCCTTTGAGCGGCCCCCGGGCAGGTACAGGTTCTAAAACGAAAGTATTTGGGTAGTCCA CTTAGTGATATTAGTGGATNGTGTAGACAATAATATTAGTCCTAGA

Sequence 1231

Sequence 1232

Sequence 1233

CCCTTTGAGCGGCCGCCCGGGCAGGTACTCCATAATATATCTTTTAAATGGGCAACTTC
TAAATATTGATNCAACCATTAATAATAATGCTTATAGGGNAAAAGAAAATTTTTGAAGCA
CTGAATTCAGTAACCTGGGTCATGGTCCAATTTTGCTCACTACTTCATATNTTTTATGTN
GGATTATTCCTATAAACATGTTCCCTAAATTCCCATCANTTTGNAAAGNCAATGGATTAA
ATTATTCAAATGTGGCTATTTAACGGCCAGNAAACANTGCCTAGAAACCTAT

Sequence 1234
CCCTTAGCGTGGTCGCGGCCGAGGTACAGTTTTTGCNGATTGCNNNANGANTGCCCCATG
AGGGGGGANAAAAAAATTNTTTTTTTTATTATNTTGGATCTAGCCTANNTCTATTTTTC
CACCTGCCCCAATTAGGTATTTCCCANTTGCNACCGGCCTAATTCCANAATTAAATTTGT
NCCTNTTATAATTNGTTTNCTNNANTCCAATTGAAACCCCTTTTGGGGTTATTGNNTCCN
CNCACACTTTTTTNATTGTTTAAANNCCANTAAAAAACCANTNTTCNTCGGNTATATAAA
ATAANACGNCCTTTTTACNTTATNGTTAATTAAAAANCCNCAATTCCTTTTNGTTNGNCC
AACCCACTTGGAAAANTTCCAANTAAACCTCTNCCTTCCACCANGNGANGGACCAAAANN
AGGAAAGTAACCCCCTTANTGNNAAAAGGNNTGGGGGAAANNTTTNGGGCCTTTTGGNGG
TTNCCGNAAAAANAAGGGGNTAAC

Sequence 1235

CCCTTCGGCCGCCCGGGCAGGTACTCTGTAAGTCTGGAAGAACAGGTCACATTTATTCAG ACTTCTCCCCCACAATTTTTAATCAAGCACCTCCCAGTAACAAGTTATTTAATTAGATCG ATTTTAAGTTGACAACAGATGTATCAGATGAGGAAAAAATTGAGCATGTGTGGTGTGATT ATATAATAGAATTGGTTTCTATAAACCATTTATAGTATTCAACTTTTATAGTATTACTTT TTCAGATGTATGGATATATAGACTATTATTTACTAACTGAGGCTCTGCGAAGTGTAGTGT AT

Sequence 1236

CCCTTAGCGTGGTCCGCGGCCGAGGTACTCGGATCTNTTATNNNGTNNAATAANNCCTCT TTCGTCTACAAGCCACACTTATNCAAAATTNTGTGGACAACTCACACTNGCTATNATACC TGCTTANATTCTCCTANTTAGTCCCTGAGGGTTTATACCTTTTATTCTTTCATTGAAATT TTAACAGAGGTTTCTGTCGGAAGCAGAGTTAAATGCCTATGTTNACTCCATCATGGTTAT CTGAAAGTCTGAGGNGCAATTTCAAAAACTCA

Sequence 1237

CCCTTTCGAGCGGCCGCCCGGGCAGGTACAAAGCTAGAAGCAGCCTGGTCCAGATGGCTA TACAAACCCGAAACTGTNTACACCCAGACTTTATTCTTCTACAACCAAATTCCTCAAACA CACAATCTGAACAGTAGCAGTGAAAGGGAGTTTAAGGTGGGGGTGAGGGAGAAGGGAGTA ATATGGTTTTTTTAGTAATATAGTAATTTACA

Sequence 1239

CCCTTTGGCCGCCCGGGCAGGTACGCGGGGGGGGGTATGTNGGGCCAGAGCATCCGGAGGT

ANANAACCTNTTTNTNCTTAGGAGCCACTATGAGGAGGGCCCTGGGAAGAATTTGCCAT TTTCAGTGGAAAACAAGTTGGTCCGTTACTAGCTAAGATGTGTTTTGTACCTCGGCCCGC GACCACNCTAAGGGCNAATTTCCAGCACACTGGCGGCN

Sequence 1240

CCCTTAGCGTGGTCGCGGCCGAGGTACGCGGGCTACCAAACCTGCATTAAAAATTTCGGT TGGGGCGACCTCGGAGCAGAACCCAACCTCCGAGCAGTACCATGCTATATTGGTCACTGT AGCTCTGTAACATAGTTTGAAGTTGGGTAATGTGATTCCTCTAGCTTTGTTAGCTCTGTT GTTTTCACTTAAGTATTACTTTAACTATTAGGGCTCTTTTTTTGGTTCCATATAAATTGTA AAATAAATTTTTCCAGTTCTGTGAAGAATN,CATCGGTAGTTTGATAGGAATAACATTGA ATCTGTACCTGCCCGGGCGGCCGCTCGAAGGGCGAATTCCAAGCAC

Sequence 1241

CCCTTTGAGCGGCCGCCCGGCAGGTGGATCACTTGAGGAGTTACAGACCAGGACTGGTC
AACATGGCGAAGCCCCATCTCTACTAAAAATACAAAAATTAGCTGGGCCGTGGNTGGGCG
TGTGCCCCGGTAATTAANTNCCCNANCTTACCTTTGNGGAAAAACTTGAAGGGCCAGGGA
AGAAAATTNCNGTNTTTGGNAAACCCCCNCCNTAAGGGTTGGGGAAGGGATTTGGCCAAG
GTTGGAAGTTTCNAAAAGGAATNTGGCCAACCACAAGGNTGNCCAACCTTCNCCAAAGCC
CCCTTGGGGGNCCCAAAANNNAAGNTTGGANGTAACCTTTCCCCAATTCTTTTNAATNAT
ATTACANNTATNTAGATANACNNTATAANAGNGANNNGANANTGGGNTNACCCCCTTNNG
GAGGCNCCGGNCNGNAACCCCCANCCNNNCCTTTAANAGGGGGGGGCCG
Sequence 1242

Sequence 1243

CCCTTAGCGTGGTCGCGGCCGAGGTACAGAATTCAGTTTCTGGGGAAAGTGAAGCNTGAA
GGGAATCATANGAAAAATTTGATTTTTGTGTATGGTGTAAGAAAAGAGTTCCGATTTTCA
ATCTTTTTGCCACANTGGGATTNTCCCAGGCCTTTTTTCCCAACANCCCATTGTTATTTT
GGAAAAGGAAGNAACTTACTCNTTNTTTCCCCCGCTTTTTTGGTCGGGAANTATCCTTTT
GGGGNCAAAACCTCTTATGNTTTGGGNAAAAGAGNGCCCCTTTTCACCTTTTTTGNCCTT
TTTCNAACCTCTTNCAATTGGGGGTCTTTCCACCCAATTAACCCAAAAGGNTTGGAACCC
CCTTNGGAAGNTTTNCANCCCTTCCCCCAATTCCTTATCNNCCTTGNGAATTNCCAAAAA
AACCNTTGGTTGCTCCNGTTTCCGTTTCNTTTAAAANTTTTTCCTCNCCGGGGNAAGTGG
GAAACCTGGTTTTGGCNTTCCAACCCTTNGNCATTTGNCCATTGGAATACCCCCTCAAGN
AAAGNAAAAGGNCCTTNGNTTTTGTNNGGCCNTTNGTTGGCCCCAANG
Sequence 1244

CCCTTAGCGTGGTCGCGGCCCGANGTACAAATAANGTCTTCCAAGGGTTCAGAATAGAAA
ATGATNTCTTCCAGCTTGGGGACATTTGGGAAATTGGGATTCTTTGGGGAAATGTACGTA
ATCAGTATATTCTGGGAAAACATANTANAGAATGAATNNATAAATTNCATTGAATTNGGA
ATATGTTGTCCATTCTCCCTGTAACTAATGCTATCAAGATANAGTAGAAATACCACATTT
CAAAANCAGCTGGAGTANACAGGTCTTCATAGGCTAGCTTGGAAACCTAATAGCTATTAA
TAATGAAATTTTAATTATACTCTGGATTCTAAACAATGAACACACANTGATCTTTTTGAC
TT

Sequence 1245

CCCTTAGCGTGGTCGCGGCCGAGGTACAGATGTGTCCTTTCTTATAGTCNGTCAATGCTG GGAAGTAACAGGCAGATGTGACTTCACTTGANCATTTGGANGAANCAAAAAAGGTTGCGC TTGNTCGNNCCTTAGGGTTTAGATGGGCAAGGACCTTGCTTTTTGCNTCCCCAATTTCTT

AGGGTAGNTGTTNTTCTTTGNGTTGCANGGGATNNGTANACCGGTACATCCTTCTTGNNG GAACCAAGGGGNNNACNTTATGAANTGNAAAAGGGGANGTTCCTTTGTAGTAAANGGCCT TGGATTGGTTTTCAAANNGGNAAGNTGGGGTTCCACCA

Sequence 1246

CCTTNTATTCTAATTGTGAACCATGGCCCTGAAAGCTTGATAANCAAGACTTGGCTGAAN CCAGAAGGGGNAACTAAGTGNGGTTCGGCCAAGNAAAAGGGATTANTTGGGGATGNGAAA ANTCAANTGGNCTTNTTCCCTT

Sequence 1247

AAAANCTGTAATTCTTTATTTGAAACAANTGCNTTCAAAAGAANTNAAAACACTTCAAGG ACTTCTAGTAAACATAAAAGGTCNAACAAACTGTGGCAAAAANTTTTGCAATTNGTANAT **AAGCTAANATAGGGGTTAACNAGTACCCCAGGCCANAATTAAGGNGGNATNNCNTCAANT ACTTCCANTCANNNAAAAAGGG** 

Sequence 1248

CCCTTTCGAGCGGCCGGCCCGGGCAGGTNCTATCCCTATGAGGCATAATTATAACAAGCTC CAATAGGCCCTTNGGNTAGTTAACCAGCCCATTTCTTCATTCCAAAACCCCNCCCTGNAA AGCATTNNAACTCGGGNNGCCANNTTCAATNTCTTACAATNAAATCCGCCNCCCAACCGG GGCCTTTTAACAATTNCCCTNCCAATATTACCTTAATTTNCTTGGGCCCTTAGGCCAAAT AANCNTGCAAAAACCTTAACGGNAAACCGGGCAACCTTCCANCCCAAGGNTGCGGCCAAT TTCNATTAAAATTNCCCTNCNTTCCTACCAANAGGGGGA

Sequence 1249

CCCTTAGCGTGGTCGCGGCCGAGGTACTATATGTTGCTCTCTCAGTGGCAACAATGAAGT TTTTGCAATTCTAGAACTTGGATTTTTTTTTTAACAAAAGTCCCAAAAACACCAAAAATGT TTAATTTTTAACAACTGAAGTCTTATTGTTGAAACTTATTTTTCA

Sequence 1250

CTNTACATGCATGCTCCAGCGGCCGCCATGTGATGGATATCTGCANAATTCCCCTTAGCG TGGTCNGCGGCCGANGTACTTAGGTGCCTACAACATAAACAGCA

CCTGTAGATGCATGCTCGAGCGGCCNGCCAGTGTGATGGATATCTGCAAGAATTCGCCCT TCGAGCGGCCGCCCGGGCAGGTACGCGGGCAACAGTTAAATCAACAAAACTGCTCGCCAG AACACTACGAGCCACAGCTTAAAACTCAAAGGACCTGGCGGGTGCTTCATATCCCTCTAG AGGAGCCTGTTCTGTAATCAATAAACCCCGATCAACCTCACCACCTCTTGCTCAGCCTAT ATACCGCCATCTTCAGCAAACCCTGATGAAGGCTACAAAGTAAGCGCAAGTACCTNGGCC **GCGACCACGCTAAGGG** 

Sequence 1252

CCCTTTCGAGCGGCCGCCCGGGCAGGTACCTATTATTATTTCAAATTTAAAAACTTCTTC TTTTTTAAGAGATAGGGTATCACTATGTTGCCCAGGCTGATCTTGAACTCTTGGCCTCAG GTCCTGCTTCAGGGTTACCTTCCCTGACCACTGCTGCCTCCCCAGCATTTGCCAGGG TTTGAGACAGCGTTCTTAGTCTGTCGCCAAGGCTGNGAGTTGCAGTTGGCCGCAATC

TANTAGAGATGGGGTTTTACCATGTTGGCCAGGCTGGTCTTGAACTCNTGACCTCAGGTG ATCCACACGCTTCANCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACCACGCCCAGC CTAAATATTTNTTTATAGCAATGCAAGGATGGCCTAACACACTGCCTAAATCAAAATTGC TATTCACTTCAAGGGTATTTCATTTACCTGACTAGCTTTTTTTGGGTGCATNTGGAACATA **ATGTA** 

Sequence 1254

CCCTTTCGAGCGGCCGCCCGGGCAGGTACAGTCTTTTATCTTGGGATAAAATGGCTAGAT GAGTATGGACAGGGAGGCAGGCAGATACAGTCCTTGCTTCTGGTTTTAAGAGTTCTTCT GAACCACAATCAACTTCTCCAAACACCCACCTTTGTCTTCTACCACAATAGGGGTCAGAT CTATTGCTGACTTTTCCTCCACCTTCTCTACATCAGCAGCACCTAGGGGAAGAAATGTTA

TTGAGACTATACCTAAAGGAAGAACATTCTCCTCTGTTGCACACTATTATCCAATTGGAT AGACCCACATCTAAATGTCTGCAATTACAGTAATGTCAGCTGGGCATTGGTGGCTCATGC CTGTAATCCCANC

Sequence 1255

Sequence 1256

Sequence 1257

Sequence 1258

Sequence 1260

CCCTTCGAGCGCCCCCGGCAGGTACTGGTGGGATTGTTAGACCATCCCAAAAAGGA
AGTGCACCTTGGAGTCTGTGGAGCTCTCAAGAATATCTCTTTTGGACGTGACCAGGATAA
CAAGATTGCCGTAAAAAACTGTGATGGTGTGCCTGCCCTTGTGCGATTGCTTCGAAAGGC
TCGTGATATGGACCTTACTGAAGTTATTACCGGTGAGTTCTAGGCCTAAGGAAAATTGCT
AAGTCAGTGTTACTCTCTAGTGATGTTGAGAACTAGAGGGATTTCCAGACCTTTTACTTT
TTGATGAAAGGTTGTGAACTGGTGGCTGTGGGTCAAAATCCATCTCACAGNATTTGTTTT
TGGATC

Sequence 1261

Sequence 1262

CCCTTAGCGTGGTCGCGGCCGAGGTACACTCCATCAAGCCTGGTTCCTAGGATGCTGGAC TTCTAGCTTAGTGAGAATGCAGTATACTTTTTGAAAACTTCGTGCAGGAATCCCTCAAAT GCTGTAACTAGGAATGGGTCAGTGAAGTTCAAACGACTTTTCCTTGAGGGAGTATTTTAA TCGGACAAGGGAACTCTTTTTCTTTTGGGCAATGGCCAACAGGACTGAGAAGCCAGAGAG CTTGCACCTGAGCCATCTCAGCCGTGAGAGTAACAGTCCTAGGAAAATAGATGGGGGCTG GGGGTAAGGAAAT

# Table 1

Sequence 1263

CCCTTTCGAGCGGCCGCCCGGGCAGGTACTTTGTGTTTAAGAGAAATTCCTAAACTGGAT
ATATGTGGCAGGCTGAAAGCACTGTGAGTTGAAGTCAAGGGGAGAGGTCCAGGCGCAGTG
GCTCATGCCTGTAATCCCAGCGCTTTGGGAGGCCCAGGCGGGAGGGTTGCTTGAGGCCAG
AAGTTTGAGACCAACTTGGGCAACATAGCAAGACCTCGTCTCTACAAAAGATCNNNAANT
NAATANTAATNTAAATTAAAGTTCCTTTGGGCCGNNACCACNCTAAAGGGCGNAANTTTC
CAGCCACCACTGGCCGGC

Sequence 1265

CCCTTTCGAGCGCCCCCGGGCAGGTACCTTATTGTTAAAGTGAGTCAGATAAATCTTC
AATTCCTGGCTATTTGGGCAATTGAATCATCATGGACTGTATAATGCAATCAGGATTATTT
TGTTTCTAGACATCCTTGAATTACACCAAAGAACATGAAATTTAGTTGTGGTTAAATTAT
TTATTTATTTCATGCATTCATTTTATTTCCCTTAAGGTCTGGATGAGACTTCTTTGGGGA
GCCTCTAAAAAAATTTTTCACTGGGGGCCCACGTGGGGTCATTAGAAGCCAGAAGCTCTN
CTCCAGGGCTCCTTCCCAAGTGCCTANAAGGGTGCTTNTAGGGAAACATTAGGATTCCCA
GCCCAGGGGGCT

Sequence 1266

Sequence 1267

Sequence 1268

CCCTTTCGAGCGCCCCGGGCAGGTACGCGGGGGGCTTTGCAGATGTGATTAAGCAAA GGACCCCAGATGGGAGATTATTTTGAATTACCTAGGTGGGACTCCACGTCATCACAAGG GTCAGAATCCAAAGAGATGTGAGAATGAAAAGCACAAGTGAGAGCAGTGGGATAGCCAAA TTTTAAGAGGGTTGTGAGCCAGAGAATATAGGCCGCCTNTAGAAGCTGCAGAAGGCCGGG GTGGACAGAGTCTCCCTGCGAACCTCCAGAAGCAGCACACCCTGCCCACTCACGGTAGA CTCTCGATCTCCGGGCTGTAGAAATAATACATCTGTGCTATTTTAAG

CCCTTAGCGTGGTCGCGGCCGAGGTACATTTAAAAGGTGATGCTAATACTTTAAAATGTT TAAGANATAAGATTTAAAAAGCATTTGTAAATTGTATACTTGCANANGTCCGTNCTACAT TGGCATTTTGGAACAAGGNACATTAATTGGTT

Sequence 1270

CCCTTAGCGTGGTCGCGGCCGAGGTACTGCAAGCAACAGTTACTGCGACGTGAGCAGCAACAGAAGTATNCTCTCCTGAAATTATTANGCAGTACTTGNATCAACCACTCCGCCGTTACCCATACCAAAGCCGTCGCCTTGGNCACCG

Sequence 1271

CCCTTAGCGTGGTCGCGGCCGAGGTACAATTTTTAGTCAAGGGATTGTTTGATACTCTTT
AAGTTCACTGCCAGGCCTACCACTTATCTCTGTCCCAGGAGGAGAGTTCCTTGTAATGAG
AGGTTTTTAAGACGTCCTTTGTTCTGGGATGAATCATAGGGAATGACTGCCTTTGGAGCT
CAGGATATTAAACTGAGTGGTGTCAAATATTNCCAGGATCAATTCGACAATGCCATGTGT

# Table 1

ACCTGCCCGGGCGGTCGNTCNAAAAGGGCNGAATTTCCANCACACTGNCGAGNCGTTACC TANTTGGATTCCCGAGTCTTCTGNTTCCAAAANTCTTTTGGCGGTTA

Sequence 1272

CCCTTAGCGTGGTCGCGGCCGAGGTACTCAATGTCACATTNNCATAGGAAAGGTTATATA TACACTATACACTTCAACCTTGAAATGTGGACCCAAAAAACATTCTATTTTTCAGTAATC NATTGAATTTNGGTGAGGGGTCCNACACCCTCAAATCCTAANTTTATCACANAAAAAGCC CNTNCTTGGCTGCCAAGCGCTGGCNGATGAACTTTGTNTTGCTGNANCTCTTNATGANTT GGATNCCANAGTNTCNTGATGATCCTNTTCAATGTTTANGAGCATNTGACCNGNCATGNT GTAGNGGANTGACTTTC

Sequence 1273

Sequence 1274

Sequence 1275

ATÁGGGGCCGGAAATTGGGGGCCCCTCTAAGAATGCCATGGCTTCCGAGGCCGGGCCCCGCCAAGTGGTGGAATGGGGATATTCCTTGCCAAGAAATTTC

Sequence 1276

Sequence 1277

GTACCAACACAATTGTTAATTTCCTCACAGGCTNAAGGCATTCTGGGAAGCTATACAGGG GACAGGAAGCATTTTTTGGGAGCCTAAGGGGAGCCAGTTTGGAAGAGACAGCATTCTCCT GGCTAGGACAGGTGGNGGNGGTGGCCGGGTTTNAGGNTCTNCAAGGGACCCTNTGCAGAT GCCGGGGCCCTGTTTATTCTGAGCAC

Sequence 1278

Sequence 1279

ATTTAATAAGATTTGAGCATAGATATTAAACTTAGCATGGACAGAGAAACTTATTTNTTG GGGGACTGGCATAAGTGAAAGAACAGAATCAGTNTGACCAGAGAGAGCATAAAAACTTT

Sequence 1281

Sequence 1282

Sequence 1283

Sequence 1284

CCCTTAGCGTGGTCGCGGCCGAGGTACTCACAAATAACAAGACAAATTTGACCTGTTCAA
TAAATAGAAATGAAGTGGCTAAAAATGTTTAAATGGAAGTGGAAAACAGTCGTCTTTT
GTACTTGGTCTCTACCTCAGATAATTCTTCTTTGAGCTTTTGAGTAGCTTCTCCCTTTTTC
ACTTAGTTCTACATGTATTCTATGCAGTGAGGTTTCAGATGCAGACAATCTTGACTGAAG
CTGTTGACAATCTAGGTCTTTTTGATGAAGGGTTGCCTGAATATTCTTTTTACTCACAGA
TTCTTCATTATGTTTCTCCT

Sequence 1285

CCCTTANNTTGGTCGCGGCCCGAGGTACTTTTTAATCTTATTAAACTAACCCCTGTG
GTGGTGTGGCTACATTCTTTGAGTTTAGAAAACGAGATAAAGAATTGCTCATATCTTCCC
AAATTGTGTAGTATAAAAAGAATGCTGTCCTGGTTGTTTTTTTGTAGAATATGGAAGTCCC
TGCAGTAAGTAGGCAACATGCTACCCTTCTATTCAACACAGCACTAGAACAAGGCAAGTG
GGACCTTTGTCGACACATGATTCGATTTCTTAAAGTCATTGGCTCTGGAGAATCTGAGAC
ACCTNCATCCACACCCACAGCTCANGTTAAGCTGCAAAAGTTACACATCTTCTCTAGGCC
ATACACCCACGTAGCATCTTTCTCTAATGGTACCTGCCCGGGCGGCCCGCTCGAAAGG
Sequence 1286

CCCTTAGCGTGGTCGCGGCCGAGGTACCTTGTGCAGACCGCCTACCTCATCCTGTGACTT AGAATGCCTAACCTCCTGGGAATACAGACCAGTAGGTCTCAGCCTTATTTTACCCAGCCC

Sequence 1289

CCCTTTCGAGCGGCCGCCCGGGCAGGTACTAAGGTTGTTAGCCCTCTGCTGGAAGAGAGT GTATTAGTCCATTTTCACACTGCTGATAAAGACATACCCGAGACTGGGTAATTGAGAAAA AGAGGTTTAATGGACTCATAGTTCCATGTGGCTGGGGAGGCCTCACAATCATGGTGGAAG GTGAAAGGCACATCTTACATGTTGGCAGGCAAGAGAGAAATGAGAGCCAAGCAAAAGGGG AAACCCCTTATGAAATCATCAGATCTCGTTAGACTTATCCACTACCACAAGAACAGTGTG GGGGAAAGCACCTCCATGATTCA

Sequence 1290

Sequence 1291

CCCTTTGAGCGGCCGCCGGGCAGGTACATAAGCTCTGCCTATCTNTGNGGNATGGATCC TACATCCACAACTACACATTNTTTATTTATTTATTTTNTGCAAATCCCAATTCCCCAAAN ATGGGCCTCACCTCATTGACATATNC

Sequence 1292

Sequence 1293

CCCTTAGCGTGGTCGCGGCCGAGGTACTACCTGTTTAAGGACATACCAGAAAAAAAGTAT
TGATTTTTATCCTATGCTAAACAGTGCTGTGATAACTTTTGTATCACTTGGAGAATGCTC
CTGAAATTATGCAACACTACTAGATAACCCCTGGATCAAAGAGGGAAATCAAAAGGGAAAT
TTCACACTGTATTGTAAAGAGAGGAGACTTTTATGCCAAAATACAGTAAGTCTTTTAGTC
AGATAAAATTAATAATCTTAAATTCCATTCATGTTAAAGAAGAAAAAACAATTAAGAAATC
TGACACTAATCAGAAGAAAATTAGGAAAACGAATAAGGAGAAATCAAAA

Sequence 1294

Sequence 1295

Sequence 1296

CCCTTTCGAGCGGCCGGCCGGGCANGTACAATGCACATGCCGAANGACCTTANTNTTGGA TGTGATGAAATGTTTTCTATGCCTGGAATAAATGCCTTNCTTTGGGNTGTAATATCTTAA ATACGTATTGCTCCTCNATCTGTGAGTTATTTAATTTTTTTCTCTGAAGNAGCTNTGATT

**TCTGGGCTTTCTAGTGTGATCATCTA** 

Sequence 1297

CCCTTAGCGTGGTCGCGGCCGAGGTACATTTAAAAGGTGATGCTAATACTTTAAAATGTT TAAGATATAGCATTTAAAAAGCATTGTAAATTGTATACTGCAGTGTCNGTCTACATGGCA

Sequence 1298

CCCTTCGGCCGCCCGGGCAGGTACGCGGGCTTCCTACTTCCACCAACCCCTCTTNGCAGA GACTGCTCCATTCCATTAAAAGGNGAAGGTTCAACTGGANACCTNCAAAGTTGGCTGGGC

Sequence 1299

CCCTTAGCGTGGTCGCGGCCGAGGTACTAAACGTGATGAAAAATATGCCAGACCTGGCCG GGCCTGGTGGCTCAACGCCTGTAATCCCTGCACTTTGGGAGGCCGAGGCAGGTGGATCAC GAGATCAGGAGATTGAGACCATCCCGGCTAACACAGTGAAACCCTGTCTCTACTAAAAAT ATGGCATTGGACAGGACATAATTGTAAAACATAAAAAGTGCAATTGGTTACACTTACATN TGATAGTGAATTGGCAAACGTGACCAATTTTTT

Sequence 1300

CCCTTCGAGCGGCCGCCCGGGCAGGTACATACAAAAAATCATTAACTCATATATTTCAA GAGTAGGAAATGGGAACTGGTGTTAAAACTCTTATAACATATGTCACTGNCTTAAGGGAC AGTGTTTTAAAAACGCATACCTCGGCCGGGCGCGGTNGGCTTCATGCCTGTAATCC

Sequence 1301 CCCTTTCGAGCGGCCGCCCGGGCAGGTACATTTAAAAGGTGATGCTAATACTTTAAAATG TNTAAGATATAGATTTAAAAAGCATTNGNAAATTGTATACTGCAGTGTCGTCTACATGGC **ATTGGACAGGACATAA** 

Sequence 1302

CCCTTGAGCGGCCGCCCGGGCAGGTAGGGCGCGCAGCACCCCCAAAGTCGTCGGA

CAGCAGTCCGTGAGACCTGTGTGCCAGTCACTGAGCTGGGTCTGGTAGCAGCTGGTGGTG GCGCACTGGGGCTGACTGGTCACAGGGTAGGACATAGCTTTGCCTTTCACGTTGTCGTGC ATCTCAAACTGCATCTTGCTGGCCCTGAGGAGGTGGCGTTGGGGACGGCAGAAGTGGCCT GTGGCAACAGTGGCAGNAGTCTTGTCCAAGGGGAC

Sequence 1303

GTAGAAAATTTGAGCAACAAAATAAATAAAGTAGTATAGGATTATGACCCCAAGTATAA GAAGAAAAAAGACTATCCATAGCAGAAGAATTCCAAATAATTTTATAGACAGCTCCCCT TTAAGAAAACAGACCTACTGAGTGTGGTCTACAATTAATGCTCGCGTACCTGCCCGGGCG GCCGCTCGAAAGGGCCGAATTCCAGCACACTGGCG

Sequence 1304

CCCTTAGCGTGGTCGCGGCCGAGGTACTGTGATTAAGCCAAACTTCAGCAAAAAAGGAAG TAAATTTTCTTAGCAAAAGTCAAATGAGTAACAACACACAGTTTGGAAACATTTGNAGAG GAGAAAACAAATATCTGACAAGAGTACCTGCCCGGGCGGCCGCTCNAAAGGGCGAAT Sequence 1305

CCCTTTCGAGCGGCCGCCCGGGCAGGTACACTGAAAACTGGACATTATAACATTAATTTT ATTAGCTCTCTGGGAGTGAGCTACATGATGTTGTGCACTGAAAATTACCCAAATGTTCTC GCCTTCTCTTTCCTGGATGAGCTTCAGAAGGAGTTCATTACTACTTATAACATGATGAAG AAGCAGCGATATAATAATCCCAGGTCTCTTTCAACAAAGATAAATCTTTCTGACATGCAG ACGGAAATCAAGCTGAGGCCTCCTTATCAAATTTCCATGTGCGAACTGGGGTCAGCCAAT GGAGTCACATCAGCATTTTCTGTTGACTGTAAAGGTGCTGGTAAGATTTCTTCTGCTCAC CAGCGACTGGAACCAGCAACTCTGTCAGGGATTGNAGGATTTATCCTTAATCTTTTATGT GGAGCTCTGAAATTTAATTCGAGGCTTTCATGCCTATANAAAGGCTTCTGCCAANTGATG GNGAATGATTTAATTACCTCATTGGCATTTTTTCTTGGGAACAAGCAGCCCTGGCCTTT ACCCAGGGTANGTTTTCTTTCATTTTTNAAAGAAACACCTTTACCATTATTGNTTNCTTC

AAGGGATTAAGTCTAAACAATTGGGCCTTTTTTAAAATAANTTATTTAAAAACCCCCCAAAA

Sequence 1306

Sequence 1307

CCCTTAGCGTGGTCGCGGCCGAGGTACCC ITGTTACAAATATACCATCATCATCAGGTCT
GAATGGGTTTCCTCTACCCCCGACACCACCTGATATGCTAAATCCAAGTTCTGGATCCTT
TTCAACCCTCACTCGAATCTCTTGTTTTGCCAGTTCATGGCCTTGTCTAGGAGAACAATG
GGGCTGTGTATATGGAGACTGGTGGGCCACTTTCAGCATCAAGTAATCAATTAGTTGTTC
TCTAGAGGGATGCCTTGCCACAGATGCCTGAGGGGGGGTGATGTATTTGACTATAATTTGC
CTGAGGCCTGAGAGGCTGGCCCATCTGTCCATTACTCAAAGGCATCTAAGAAAAACATGA
AGTATCTTAAAATGACCAATAATAATGTCTTATTTCAAATATTTGGATTTCTTTGGAG
CATTACAAAAGCACTAGAGTTTTCACATTCTAATTAAGTCAAACAATACCATGCCACTTA
CTATTTTTCTATAATTTTAAAACTTAAAAGAAATAAGCTATTAATGGCTTAATTCTAAAG
TTCCTGAGTGCTTGGTGGTACACTCACTTTTTTAAGCTT

Sequence 1308

Sequence 1310

CCCTTTCCAGCGGCCNCCCNGGCAGGNACAAACCCTNGTAGGNTAATCCANCTCTAATTG ANNGGGGAGCNNACCTTCTGCTTCCTTTTAATCCCAGATCNGAGGCCAAGGG

Sequence 1312

CGCCAGTGTGATGGGATATCTGCAGAATTCGCCCTTTCGAGCGGCCGCCCGGGCAGGTAC

# Table 1

Sequence 1313

Sequence 1315

CCTTTGCGGCCCGCCCGGGCAGGTACATTTGGTGAGTTTGAGACCAGCCTGGGCAACA CAGTGAGACCCTGTCTCTAAAAGCATTAAAGCATTAATCCTCGCATTTCGATAGGGCTAT GTAGCTTTTAAGTAAGCAATGTTAGAATGAGTTGTAGAGTTTTATTTTTTGTGAATATAGT GAGTGACAGATGGCAATTACATGAGGATATTTGAACGAAGGTACCTCGGCCGCCACCACG CTAAGGG

Sequence 1316

Sequence 1317

Sequence 1318

Sequence 1319

CCCTTAGCGTGGTCGCGGCCGANGTACATGAAAACATCAGTGTGACAGTTAATATTAAAT

GTCAACTTGATTGGATTGAAGGCTGTAAAGTCTTGTTTCTGGGTGTGTCAGTGAGGGCGT
TGCTAGAGAAGACTAACATTTGANTCAGTGGACTGGAGAGGAAGACCCACCCTCAATAT
GGGTGGGCACCATCCACTCAGCTGCCAGCGAGGCTGGAACAAAACAGGAGGAAAAAGGTG
GGATAGGTGACTTGCTGAGTCTTCCAGCTTTCATCTTTCTCCCCTGCTGGATGCCTCCTG
CCCTTGACATCAGACGCCAGGTTCTTTGGCCTTTGGACTCTCAGACTTACACCANCGGTT
TGCCGAGGGCTCTTGGGCCTTTGGCCACAGACTGAAGGCTCTACAGTGTTGGCTTCCCTA
CTTTTGAGGCCTTTTGGACTCGGACTGGGCCACTACTAGCTTCCTTNCTCCTCANCTTGCA
GGTGGCCTATAATGGGCCTTCACCTTGTGAACATGTGANCCAATTCTNCTTAACAAACGC
CCCTTCATACATACATATATCCTATTAGTTCTGGCCCTCTGGAGAACCCTAATACACTCG
ATAAAATTTCAATTAAAATTTTTAAATA

Sequence 1320

Sequence 1321

#### AAA

Sequence 1322

Sequence 1323

Sequence 1324

CCCTTAGCGTGGTCGCGGCCGAGGTACTTGGTTTAGTTATGGCTGTTTTTTGCCTCTAAC
ACTTTATTTTAAAAAGAAAATTAAAATAGGTTATTGGGATCAAAGATATAGGCTTTTTG
TTACTTTGAATGATTTTTGTAATTCAGAATATGCACTTGTTATTTCAGTTCTTATTTTA
TAATTATTGGTAGAGTTCATCTAATTACCCTATAAATCCCTGGAGAAAGGTGGCCCCCAT
ATACTTTATTTCTTGGTTATATGTATAAAAATCAGTAGGCAATGTAAAAATGTTTTTGTG
TGAATTTATGTGAGTTATAATTCTAATTCTATGTCAATATTCACCTCAGATTACCACATG
AAAGCTCAGTCACCAACTATGCCTCATACTGAAATACCCACTGATTAAATCAAGTTGACA
ACCAGCTCCTATCGTACCTGCCCGGGCGGCCGCTAAGGG

Sequence 1325
AAGCAGGCATAGCATATAANCAAGCTTTTTTTTAAGGCTGAGTGACTTATGTGGCTGATAG
AGGAAGGATAGGAGAAAGGAAATATAGTGAAAAGGAACAGAGAGGAATAATAAAGCTGG
CAAGTCACAGACANCATAATTAGACTATCAAAAGAANATTTGGAAGAAAGGCATGGACAG
GAATAAAGACCTNCTTCTAAAGCAAGGTAGGGAGAGCAACTNNATGTAGATTGAANAGAA
AAAGGAAAGAAAAATG

Sequence 1326

Sequence 1327

Sequence 1328

ATCTCCACCGCGNGGCGCCCCCGGGCAGGTACCGGAAATCTGCAGATCGCCAAGTAA
TTCCTATAATGATGCCCTCCTCACGTTTGTCTGGAAACTGGTTGTGAACTTCCGAAGAGG
CTTCCGGAAGGAAGACATAAATNCCCAACGAGGAGGGACATNGGANCTCCACGACNTNNC
TCCTATTACTCGGCACCCCCTGCAAGCTCTCTTCATCTGGGCCATTCTTCAGAATAAGAA
GGAACTCTCCAAAGTCATTTTGGGAGCAGACCAGGGGCTGCACTTCTGGCAAGCCCCTGG
GAAGCCAGCAAGCTTCTGAAAGACTCTGGCCAAAAGTTGAAGAACCGACATCAATGCTTG
CTGGGGGGAGGTCCCGAGGAAGCCTGGCCTAATGAGTACCCTCGGGCCGGCTCTAAGAAA
CTANGTGGGAATCCCCCCGGGGCTGGCAGGAAATTTCGATNATTCAAAGCTTTATCGNAT
ACCCCGNCCGACCTTCGGAGGGGGGGGGGCCCCGGGTACCCAAGNCTTTTTGTTTCCCCT
TTTAGTTGAAGGGGGNTAAATTGGCGCCGNCTTTGGG

Sequence 1329

CCCTTTCGAGCGGCCGCCCGGGCAGGTACAGAAGGTTTGGGATTCAGCATCACTTCCAGA
GATGTAACAATAGGTGGCTCANCTCCAATCTATGTGAAAAACATTCTCCCCCGGGGGGCG
GCCATTCAGGATGGCCGACTTAAGGCAGGAGACAGACTTATAGAGGTAAATGGAGTANAT
TTAGTGGGCAAATCCCAAGAGGAAGTTGTTTCGCTGTTGAGAANCACCAAGATGGAAGGA
ACTGTGAGCCTTCTGGTCTTTCGCCAGGAAGACGCCTTCCACCCAAGGGAACTGAAAGCA
GAAGATGAGGATATTGTTCTTACACCTGATGGCACCAGGGAATTTCTGACATTTGAAGTC
CCACTTAATGATTCAGGATCTGCAGGCCTTGGTGTCAAGTGCAAAGGTAACCCGGTCAA
AAAGAAGAACCACGCAGATTTGGGGAATCTTTGTCAAGTCCATTATTAATGGAGGGGGCA
GCATTCTAAAGATGGAAGGCTTCG

Sequence 1330

Sequence 1331

Sequence 1332
CCCTTTCGAGCGCCCCGGGCAGGTACTGGATTTTTGCAAGCCCTCTATTTAAAATTC
CCCAGAAATTAAATAAGGAGGCTTTGGAGGGAGGAATGCCCTANACAAATTGTGGAGTGG
GTTTGTTTTGTTTATGGAGATGGTCTTTAAAGTCTAAATTGTCCCCGTTTTATTTTTGCC
CAATTGAAGAGGGGCTGAACTCAGCTGGGAGGGAGGGGATGGTTGTCAAGCCTACAGCTT
TTAGTTGAAACCAAGTCCATTCTGGGGCCAAGAAGCTTCCATTTTTAGCAAAGAGAGAAA
GGGGAAAAATATACANACTCGTACCTCGGNCGNNACCACGCTAAGGGGCGAATNCCAGCA

CA

Sequence 1333

CCCTTCGAGCGGCCGCCCGGGCAGGTACTTAATTCATTCTACTTTGTGTTAACTATCTT
TTTATGTGTAGGTCTCATCACCCCAACCAGACTATAAATTCCTTTGTCATTATTTAAATC
CATGCATGGAACTCCCATAGACATCAACCAATCACCAATAGACAAGCCTTAGAACATGTA
TTACAGGAAAAATAGAGTAACACATACAACTAATACAGAGGAAGAACANTTGACATTAAA
ATAGAANAANAAATTAACACTCTTTGGANTCTATAAANAAATGNAAACAGAAAGAAAGAT
NGAAGGATAATNCGTNAACTTAGAATATTCATTTGCCTGCTTCAACATTCAATAATTAAA

Sequence 1334

CCCTTTCGAGCGGCCGCCCGGGCAGGTACAATAAACCAGCCAAAGAAAATAACCAGTTAG CACTTAAATAAGAATCTACCATGTAAAAAACACAGTATGGGACACTACAAGGTAGTATTT ATATATTTTTTAAATGACTGAGCTACAGTACCTCGGCCGCGACCACGCTAAGGG Sequence 1336

CCCTTAGCGGCCGCCCGGGCAGGTACATCTATCTGACCCCAGAGTTACCCTTTTCTATCA
TGCCCCGTAGGATATTGCCTGGGGACACCTGACAACAGAAAGTCTAAGGTTTTCATCTA
GGATTGGGAGTTACCCCAACACCAGCAGGATGCAGGAAAAAGTAACTGACCGGATGGTTG
CCTCAATCTGTTGATTCTTCAGTGAGTTAGCTCAGATTTTGTCCAGGAACAGCTTTCAGA
GCCAAAGATTACCGTATTGAACTCTACCAAGGCATCTGGTGACTAGAAAACTCCTGGAAG
GTGGTCATAGCAGAAATTGTTGGGAAAGTTCTCAGCATAATAAAAGAGAAATTTTATTT
CCTTCATTGATCCACTCCTACAGGGAAAAATAAATGGCANATGAACCCATGTATGTCANA
CTCTGNAATAAACATCAGTGAGATCACAGTGTCAGNGAAATTTCAGCCTGAATTAAA
Sequence 1337

Sequence 1339

CCCTTTCGAGCGGCCGCCCGGGCAGGTACTAAAAATTTCCACTATCAGAAGATCCTGATT
AAAATAAAGAAATACATAAAACTCAAACAGTAAGTCAATGTGATTATTTGTTTCATTTCA
GAAGATCTATGGGTCCCACTGCCCGCCACACGTAGTCTCCTGGGTTCTCAACGAAGTGTG
ACCAGCTCTTCTGAAGAGGTAGGGTGAATGGCGACTGTGTTGTCA
Sequence 1340

CCCTTAGCGTGGTCGCGGCCGAGGTACTTTTAACTATTTGTTTCTTCTACGATAATTGGT TTGTTGTGACTTTATCTACCTAGAGTAAATTTTGGCAATTTGCATTTTTCTCAAAATAGT TTTTGAATTTATTGTGTAAAATTGCTCAAAATAGTCAATTTAAACAAATTTCCTGTTTTA CTATTTCCCCCTTGTCATTTAAATTTTTGTATTTGTGCTTCCTCCCGCGTACCTGCCCGG GCGGCCGCTCGAAAGGG

Sequence 1341

#### Table 1

Sequence 1342

GGTCCGTGGTGCGGGATCGAGATTGCGGGCTATGGCCGCGAAGGTTTTTCGTCAGTACT GGGATATCCCCGATGGCACCGATTGCCACCGCAAAGCCTACAGCACCACCAGTATTGCCA GCGTCGCTGGCCTGACCGNCGCTGCCTACAGAGTCACACTCAATCCTCCGGGCACCTTCC TTGAAGGAGTGGCTAAGGTTGGACAATACACGTTCACTGCAGCTGCTGTCNGNGCCCGTG TTTGGCCTCACCACCTGCATCAGCGCCCATGTCCCGCGAGAAGGCCGACGCCCCCTGAAC TACTTCCTNGGTGGCTGCTCCNGANGCCTGACTCTTGGAACACCGCACGACAAACTACCN GGATTGGCGCCCGACGNCTGCGTTGTACTTTGGCATATCGGGNCTTCCTGGTCAAGAATG GNCNCGGNTTGGAGGGGCTGGNNAGGGTGTTTGNAAAAAACCCAATGTTTNAGCCCTTGTG CCTTGCCGGGGACCTTTCAGCCCTGCAATAATGCGTCCCAGAAATAAAATNNTGTGGTCT TGGTGTNNGAAAAAAAAAAAAAAAAAAAAA

Sequence 1343

Sequence 1344

Sequence 1345

Sequence 1346

Sequence 1347

CCCTTAGCGTGGTCGCGGCCGAGGTACTTTTAACTATTTGTTTCTTCTACGATAATTGGT TTGTTGTGACTTTATCTACCTAGAGTAAATTTTGGCAATTTGCATTTTTCTCAAAATAGT TTTTGAATTTATTGTGTAAAATTGCTCAAAATAGTCAATTTAAACAAATTTCCTGTTTTA CTATTTCCCCCTTGTCATTTAAATTTTTGTATTTGTGCTTCCTCCCGCGTACCTGCCCGG

#### Table 1

GCGGCCGCTCGAAAGGG

Sequence 1348

TTTAAAAAAA Seguence 1350

Sequence 1351

CCCTTTCGAGCGGCCGCCCGGGCAGGTACAAGTATTATGTATCCATAAAAATTAAAAAAT CTTTAAAAATGCATATGGGGGTCAGTAGGTAAAAGAAAAGAGAACCAAGAGAGCTGCAGC GGGGAGCACAGCTTGCTTTAAACATGAGATCCAGCTCAGTGATCATGCGGGGGAAAAGGC CCGGCATTGCTGGAACTCCTAATATTTAAAAAGATGATGGAAACTTGAAATTTTATATTT AATCTTCTCATTTTTAAGTGTTGGCAATGTATTGAAGACTTTGAAGCCTCTCTGCTGGTC AAACAAGATGTATCTGTAGGCTGGATTTAAATTTAAATTTAATTTGCTTTGATTCCTGCCTCCTGCTC AAAAAAAATCTTCAATGGCTCCCCTGTCTGCAAGGNAAAAGTCC

Sequence 1353

CCCTTTCGAGCGGCCGCCCGGGCAGGTACATTGGTTTGATCTGGAAAGGCAGGACAACCC
AAAGCGGGCTGGGGACAGTTCCAAGTTATAGGAGGTTTTCCAATTGGCAGTTCGTTGAAA
GAGTTTATCTTAAGACCTGGAATCAATACAAGGGAGTGTGTCTGGGTTAAAATAAAGGGG
TTGTGGAGATCAAGGTTCTTATTAGGCAGATGAAGCCTCCAGGTAGCAGGCTTCAGAGAG
AATAGATTGTAAATGTTTCTTATCAGACTTAAAAAGGTCCCAGACTCCTAGTTAATTTTC
TAGTGGATCAGGAAAAAGACCTGGACAGGGAAGAGG

Sequence 1354

Sequence 1355

# Table 1

CTCATCATTTAAAATGACATGGGTGTCGGTTTTGTAGATCTTTGGTTTTTTTGTCAGGTT TAATTTCAGTTAACAAAATGTAAAACATGACATTCCCTGCAGATATTGTTGTATACCAGT ATGGTTTCTTCTTTTAAATGTTTTTGGCCATCAAGTA

Sequence 1356

CCCTTTCGAGCGGCCGCCCGGGCAGGTACAACACTTTAAAAAGTGAATTTTAAGCTATGT GAATATCTCAATAAAAACATTTTTTAAATAAAAACAATTCCCAAAGGCCTGGAAATTCAG GAACATAATTCAAAATAATTTATGGATCAAAAAATAAATCATATAAAGATCTGAGAACTA CAATGTAAAAATATAGAAAAAAGTCATAACAATATTAGAAAAAAATTTGAGCTGGATAAC AAAAATAGTACCTCGGCCGCGACCACGCTAAGGG

Sequence 1358

CCCTTAGCGTGGTCGCGGCCGAGGTACTTACATGGAAATAAGTGTTAAGAAAAGGATTGC TTATTGGTAGCATATAGATTTAGAGTCAGGAATGATGGTGATTTCAAACAACCACAGAAC GTCCACATGGGTGGCTGGCCAGGATAGTGACACCTTTGCTTTCTAATGGCTTAGTGTACC TGCCCGGCCGCCCCTCGAAGGG

Sequence 1359

Sequence 1360

Sequence 1361

CCCTTAGCGTGGTCGCGGCCGAGGTACTATAGCTTCAGTGTGGTTTAGTAAACTTAGCCT AGGAGGCCAAGATGTCTCCCTAAAACTTAGTCTCTGTCCTATTTACTTTGTTTATAAGAC TGTGACCTAACTTCCCATGGCCAATTCAATCGACTAGGTTATCTTTACTCCAATGGACCC AGGCCTTTTCCCAGTCAATCCATGTCCAACCCTTCATCTCCAGCGTGATCACTCAACTCT TCAACATGCCTGCTTGCTGCAGGNTTAAAACCACACCCACCATCCTGTGCTTNCCCCTTA ATCGCCCATTGATGCCCCGCANGGTAAAATAAAAACTA

Sequence 1362

Sequence 1363

CCCTTAGCGTGGTCGCGGCCGAGGTACATTTAAAAGGTGATGCTAATACTTTAAAATGTC ATAAGATATAGATTNAAAAAGCATTGTAAATTGTATACTAGCAAAAGTCGTCTANATGGC ATTGNACAGGACATAATGTAAAACAT

Sequence 1364

Sequence 1365

Sequence 1366

Seauence 1367

CCCTTTCGAGCGGCCGCCCGGGCAGGTACAATATATTATGAAGCATGACCACTTTATTTT
GAAACTTAGCAATTGTATTGCTGGGGTTTATTGTATCTGTAGCATGTCACTGATTATTTC
AGTTAGTTTTATAATGATTTTTAAAAAAACATATCTATTTGGAATAAGATACAGCAACAAT
CATTGCTATTGACTTGTTCAACCCCTTAGTTACACTGTATGATCAACATATAACAAGATA
CAGTGGGAATGGCCCATACAGTATATTACTGTTGTGTGATGATTGGCTTTGGAAGCAGTT
TGATTTTGAAATGCTTTGATATTCTAATTGACATGGAACAA

Sequence 1368

CCCTTAGCGGCCGCCCGGGCAGGTACATATGATGGGGCCAATGCACAATACTTTTATCAC
AATCAACTTTTTCTTTGTATCCCTATTTCAATGAGCAGTCAGGTCTCAAGAGGTTACTGCA
TTTCAGTTCTAACTAGACATTTGTACTTGTGATCACACTACGGGAATCTCTGTGGTATAT
ACCTGGGGCCATTCTAGGCTCTTTCAAGTGACTTTTTGGAAATCAACCTTTTTTATTTGGG
GGGGAGGATGGGAAAAAGAGCTGAGAGTTTATGCTGAAATGGATTTATAGAATATTTTGGA
AATCTATTTTAGNGTTNGTTCGNNTTTTAACGGTCATTCCT

Sequence 1369

CCCTTAGCGTGGTCGCGGCCGAGGTACAGCTTTCTCTGCCTCACGTTTCAAGCTTAATGC
ATCATCTTAATTCATCTTTCGACATCTATTTCTACTACATGCTGCTCTCTTTCTCTATCT
TACATCTCCCAGAATGTTTTATTTCAACAAATTGCTAATCTGTGCCAGGCATTGTTATTA
GCAAAATGATAAGCCCTGCATGTAGCAAAGTTCCTGCCTTCACTTGCATATGCATTAACA
AGCTCTGATTAGTCCCACTTAAAAACCATTTGTTCCCCCGTCATGCAGAACTCCATTGCC
AAGCCACAACACCCCAGCCAGTAGGGTAGCAGCTNCCTGGAGCAAGGGA
Sequence 1370

Sequence 1371

Sequence 1373

CCCTTAGCGTGGTCGCGGCCGAGGTACAGCTATTCTCAATGGATAATTCTATAAAATATT

TAAAGAAGAATCAACACCAGTTCTCCACACTCTCCTCTAGAAGAAGAGAGGAGGATGGAATA
CCTTCCCCCTTAATTTATGAGGCCAATATTACCCTGATGCCAAATCCAGACAAAGATATT
GTCCCCCAAAATAAAACTAACGATCATAGATAAATACCCTCTTATAAATTTAGATGCAAA
ATCTTAAGCAAAATATATTAGCAAAATGGAATTCAACAATGGAATAAACCTATTATACCA
CCAAGTGGGAATTTATTTCTAGCTATTGCAAGACTAGCTTGGACCTTTTGAAAATTGATT

Sequence 1374

Sequence 1375

CCCTTTCGAGCGGCCGCCGGGCAGGTACGCGGGGGATATGATTGGCCGGCGAATCGTGG
TTCTCTTTTCCTCCTTGGCTGTCTGAAGATAGATJGCCATCATGAACGACACCGTAACTA
TCCGCACTAGAAAGTTCATGACCAACCGACTACTTTCA

Sequence 1376

CCCTTAGCGTGGTCGCGGCCGAGGTACCATATAAAAACATTCCAGTGTCAACAGCACTTT
AAATTTCACAGTAATATATGAAAGAACAGACTTTACACTTCTTTTGCACAGAATTATCT
TTGCTATGTTTTAAAATACTTAAGAAATAGAAACAAATTTAAGAGAGGTTTTCACCTTTAA
AATTTATTACATAAGCTATACACACAAAATGAAATCCTAGTTATAAAAGATGCATCTAGA
AGAATAATTTATAATAAACCAACAAAAATGAGAATGTGTATCTCCAGGAATATAAATATA
TTTAAATGTTCTCAGTGACTGGCATTGCTTTATGCATTACATAAGATAGTACCTGC
CCGGGCGGCCGCTCGAAAGGG

Sequence 1378

Sequence 1380

CCCTTTCGAGCGCCCGGCCCGGGCAGGTACAGTAATTTTGGAAACCTCTTTGATGTCTGG CTTATAGAAGACACCTGGGTTCTTATATCTGCTTCTGAATCGATCTATTGTAATGNNGTT ATTTTGGCTGAAGTATGTTGAAGAAAATACTACCTTACAAAGATATGTATTTTCA

Sequence 1381

Sequence 1383

CCCTTAGCGTGGTCGCGGCCCGAGGTACTTTGTGTTGTTGTATCCAAAATTAGGACTCT
GAGATTCTTGTGTATTCAGAGAATTTTTAGTAGGAAACAAGGACAAATTTGCATATGAAA
TGAAAATAGTTATTACATGACAAAATATGTAGATCTGATTTCTAGAAACTGAATTAGTCC
AAAACAAGTAAGAGTGGGAAAAGCAGTAAAAAGTTCTTCTTGAATATTGCTGTTGTCATC
CAAAGTATTCTTATTTCTTTTAGGTGAAAAAATTTCCATTACTCTTTTGNGATATTCTCAA
AAGAAAGTTTAGGATTTTACAGGNGTTCTGAAATACTGAATCTTAATTCANGTATTTCAA
TAGAGTATTATTGGTTTGCTTCCTTATCAGTAGATTTTTAAANTATTTATTTCTAGGCTA
TAGATCTTCCTAAAAATATAATCCAAAGTANNTTAAAAAGCCCGATTNTAANCCAAAGTA
TAAAAGATCTCTTTTTTTGGGAGCCTGCTNTNTTTAACAGTTTTTTCCCAANNTTGGGTTTT
GTTTTTGGAAAACANGAAAATATNTGGTNCNTAAAAGCCAANCTTTTANTTCTATTANNA
GGGTTTTCTCGCCTCANAANAAAAAAAAAAAAAAA

Sequence 1384

Sequence 1385

Sequence 1386

CCCTTGAGCGGCCCCGGGCAGGTACGAAAGCAGTCATAGACAGTATGTAAACAAATGA GTGCAGNTGTGTTCCAATAAACCTTTATTTACAAAAACCGGCAATGAGATGGATTTGGCC

TATGGGCCATCATTTGCAAACTCCTGATTTANAACAACCCTGCCATGAGTTCTTCCACAG GCTTGAAAACAGGAAGCAAAATACAAAAAGTACCTCGGCCGNGACCACGCTAAGGG Sequence 1387

Sequence 1389

GGATATCTGCAGAATTCGCCCTTCGAGCGGCCGTCCGGGCAGGTACTCTCAAAAGCTAGG GCTGCTGACTGAGCANCTACAGAGCCTGACTCTCTTTCTACAGACAAAACTAAAGGAGAA GACTGNACAAGAGACCCTTCTGNTGANTACCCTTGCCAAGNTGTCTGCAAATGCTTNGCC GANTTTTCTACTGAGTT

Sequence 1391

Sequence 1392

Sequence 1393

CCCTTAGCGTGGTCGCGGCCGAGGTACAACTGCCCTACATTTCTGCCTAAAGGCAATTTC

CAGACTACACANACNGAGANGAAATGCAAATAGAGCCCANCTGTCTCTGAAAAGAGACAA GAGAAATCTAATTTCT

Sequence 1394

Sequence 1396

CCCTTAGCGTGGTCGCGGCCGCGGTACTTTTTGTTTTATTTTTTATTTTTTTGAGAGGTA
TGATTCTTTCTAGAGATTTTTTCTCATGGCTACTATTAGATCAGGAATGGGTGATTGGGA
GATTATTAGATCTAGGTTAACTTCTACCACTTTACCCTAATACATAAAACTTTTTCCTAA
ATAAATGATGGAAGGAATNATACTTGGGTTACCTGGCATTATTTTCAGTAAGAAAAAAGC
TTTACTAACCACTACATTTATGGAAANTTGTAGGGGTAAGTATTTTATAGGTCATAAAAA
AACACCATAATATTAACGAATCTCATTTTTCTTTTAAATGTGAATTAAAATCCTAACAGG
CATTCTTTTATAAAAAATGACCCATAGGCTAAAAAT

Sequence 1397

CCCTTTCGAGCGGCCCGCCCGGGCAGGNACATGTGTCGCCTTANATCATNCAACCTTTCA GTCACTACTATGTGTAAGGCAGTCTGCTAGGTTCCAAGGAATGTGGGGCTAAGTGAATAA GATGCAGCTCCTTACTTTAAGTCTGGCAAGGAAGATGCATTTTTTACNTAACTTCCACAG TGCATTGTGAAACATGCCATATGGAAGGGATAAACACTGATGACAAAGTNATTGCCAACT TTTACTAATTTTGTCAAATTTTAAAAGAGGTACCTTTGGCCNCGACCACCTTAAGGGCGA ATTCCAGCACACTGGCCGGC

Sequence 1398

CCCTTTCGAGCGCCGCCCGGCAGGTACAAGTTGTAACCCCTGATTCTGTGAATGTGAC CTTTCTGGAAGTACGGTCACTGCAGATGTAATTAAGTTGANGATCTCAAGATGAGATCAT CCTGGATGCAGGATGGGACCTAACGATAATGGCTGGTGTCTTTATAAGAGAAAGGAGAAN GANATTTNAGACNCANACATGCANATAGGAAAGCCNCNTGGAGACGGAAGCCAAANCCTA GAGTGNTTAACCTACAA

Sequence 1399

Sequence 1400

Sequence 1401

Sequence 1402

Sequence 1403

CCCTTTCGAGCGCCCCCGGGCAGGTACTTTAATTTTTTCTATTTATGAATTGCTTATT
TGCTTTGCTCATTTCTCTAGTAAGCTGCTTTTGTTAATTTTTTGTGAGTAATTTATTCTAGGT
ATCAGGCCTCTGGCATGTTTCAAATTTCCTAGTGTCTTTGTCAAAGAGAAATTTTTAACT
TCAACATAAGTAATTTGTCATCTTTGTCCTTTAGTTTTTGTGATTTTAAGGACATAATAT
CTATTACTTTAAAAGTATTGAAAGCTGTATGTATATTCTTCAACTAGCCACCTTATTTCT
GTTCTAGAGTTTGAATTTCTTAACTCCAAAAACACACAATAATTTTTAAAGTCTTGATCA
AACTCTGTTATCTTCTGCATAGTCTATTTTTCAGCATTCCATTAAATGAATTGAGAAAAA
GGAGGTACCTCGGCCGCGACCACGCTAAGGG

Sequence 1405

CCCTTTCGAGCGGCCGGCCGGGCAGGTACCTGGCTACAGTAAATGCTCAAGGCCCTTTGT
TATTATTTCAGATGGTCAAGAATAAATGTTTTTCAAGGATCTTCTTTTTGTAGACAACTG
TGTAGTCACAGTTTAGAGTCGTAAATTATCTGCCTGGCAAGATACTTTTTAAAATTAAAA
TGTAAAGAACCTGAGGGGATTCACTCCCAAATGTTTATGGACAAACTGAAAGGGCATTTA
CACAGATATTACCTTCTACATTTATGTGAGAAAGTGCTTTAAGACACTGTACCTCGGCCG
CGACCACGCTAAGGG

Sequence 1406

CCCTTAGCGTGGTCGCGGCCGAGGTACATACAATAGAGTATTATTCAGCCTTAAAAAGGA
TGAAAAAATCCTGACATGCTAAAATATAAATGAATGTTGAGAACATTATGCTAAGTGAAA
TGAGCCCATCTAAAAAGGCAAATACTGTATGATTTCACTTAACTGTGATATCCAGAGTAG
ACAAATTCATAAAAACAGAAAGTAGAATAGAGGTTTCCAGGGACTGGGAGTTACTTGATA
TAGAGTTTCAATTTTGCAAGATAAAAGAGTTCTGGATATTGGTTGCACAGCAATATGAAT
ATACTTAACACTACTGAACTGCACACTTAAAGATGGTTAAGATGGTAAATTTTGTTAGGT
GTTTCTTACCACAATTTAAAAAAAAATTTTAATTAAAGGAATTAAAAAAATTTACAAAATAC
TATTCATCATTGNGGTTTNCAGTTTATATTCAACACAGCAGTATTTCAGGTATAGTAATT
AACTTACTTT

Sequence 1407

CCCTTAGCGTGGTCGCGGCCGAGGTACTAGAAGACCTTCCTCGCCACTCTCCCACATGA GAGAGTCAGCTGCCCTTTCTCCTGTGCCTCTGCAGGAAGAACTCTCTTGCATGGCACATC TCAGCTCCTCATTGAGGGATAGTTTTCTTTGATAAGAAACCTGGAGTCCATTTACTCTGA

CCCTTAGCGTGGTCGCGGCCGAGGTACTATGNNTNTNNTGTTNCTATTACNNTTAATCCT TNCTTTNGTTGTGAGCTTGTNAATGCATGTNGAGGATNTGNAGCACTGTCCACTGAGTCT CTGTG

Sequence 1410

Sequence 1411

Sequence 1412

Sequence 1414

CCCTTAGCGTGGTCGCGGCCGAGGTACGCGGGTCAATTATCTTTATCATAAACATTTTAC

Sequence 1415

CCTTCGAGCGGCCGCCGGGCAGGCACAACCTTTCAGGATGCAGTTCTTTCATGACCAT
AGTGTTTTTTTCCTATTACTCTTTCACTTACTCACAGGATTCAACCCATCTGACTCATC
TGTTCCTCCCCAGACTCTTCTTGATCTTTATTTTTTTAATTTACCAGAGAAGAGCAAG
CACGTGAGCAGTGAATAACTTGCAAGGATGCAGACTTTTTTATTTTTGCGATGCTACTTTT
ATAAAAACAAACCGTAACATAAATAACTCTTTAATGAAAACTCAGAAAAATATTAAATCT
ATTCTTAAAAGGGTTTAGAAAGAAAGAAAGAAAGACAGCTGTTAGGTTATTTGATTTTCAAGT
TTATCAAATAAAATTCAAATAGAATTGGCAAATCTTTAATGGCATATGAATACTTCTATC
ACTTAGTAATTAATTTGAACAGAGAGTGTTATTAGGGTCCTTAGTATCACTCCATCCTTTC
CCTCCATCTTTATACAAAAAAGAACATACAGAAATTTAACAAAGATATATGACTTACTCA
TATGTTTTATAAAAAAGTATCACCTAGCANGTGTCTTNCATTTAAT

Sequence 1416

Sequence 1418

Sequence 1419

CCCTTAGCGTGGTCGCGGCCGAGGTACACATAAGTTCATTCTTGGCTTTTTAAATTTAT
GGAAAGACTAAATACATTTGTGTCTATTAATCAAAATATGAATTTAGAAGGAAATAATTT
TGTGTAAAAAATTGTATGTGGGTAAAATTTTACCTAATTTAAAATTGTTGTTCCATAATTT
TTTTAAAAAGAAAAATTACAGAAATAAGACTTGGGGGGTGGGGGTTGAAAAGTGGTGAAA
GAACTAAACAAGTAGAAGAGGATTTCTAAAGCACTGGTCTCATGAAAAAAGTTTCATGTG
TGACTGGGTCCACTGAGATTGAAAAGAAATTGTTTATACGATATTCTAAAAATTAAATGT
TGCTGTCAGGGATGACATGATACAGGACCAGAGTCTGTGTAAACAACAAAGTTTTCTTAA
AGTATTGATACACGCTTTTAAAAATTGCAAGAGGTTTTAAGTTTAATTCAAAAATCTGTT

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# Table 1

TAACAGCCATTTTGTACCTGCCCGGGCGGCCGCTCGAAAGGGCGAATTCCAGCACACTGG C

# Sequence 1420

CCCTTAGCGTGGTCGCGGCCGAGGTACACCTCAGAGAGGACTTGTATCTAGACCAAGAGG ACTATGCCTGTGGGCCAAATCTAGCCCAAGGTCTTGTTTTTGTAAAGTCCCTGTGAGCTA AATGTGACAGAGACTTTATATGGCCCTCAAAGCTTAATTTCCTTATTGGCCTTTAAAGTT TGCTGACCCCTGATGGATGCTATAAAAATAATTTCAACTATCAATACAAAGAAAACCAAC AACCCAGTGAAAAAATGGGCAAAGAACTTCACCGTACCTGCCCGGGCGGCCGCTCAAGGG

# Sequence 1421

CCCTTAGCGTGGTCGCGGCCGAGGTACGACGTAACTCCAGACATAGGCTTTAGACGTTCT CATGCCACCCTATCTTCAAAACCACAGAGAGTTCATGAGCCAGTCTTGCCCATCTCCAAT CAGGGAACTTCTAAAATAAAAATCTTAGCAATCTCCTTGGCCCAAAACTTCACCCCATCT TGGAAGGGAGGGAGAGATGTTCTGATCTATATCTGATGAGGGCGTGTGGTTGGGAC CTGAGCATCCTCCTGGTTGGGCTAGTGATC 3GGAGAGAGGGCTGTTACTCACGACTCCCT AACCAGCCTCACCAAGTTACCCCTGTAAATCCTTGTCTCCCCATGCACCTCTACTTTGA 

GACACAGAACCAGTAGGAGACACAAACCCACGCAGGCACAAGAAAGGAGAACAAACCAAC ACGAAACCCAGGGATGAGTAATCGGAGGGGAGCAGCAGCACAGGGAAAAGATGACTGGG AGTCAAGAAACTTGGGGTTCAGTCCCAGCTCTGCCCTGTCATTTTCCCTCACCTGTAAAA CTGGATCAGAAATCTTACAAAAACAAAAAACAAAAAACCTCTTCAGTATTTCCCTCAAAC AGCATGACATCATTAGGTGTGTGTACCTCGGCCGCGACCACGCTAAGGG Sequence 1423

CCCTTTCGAGCGGCCGCCCGGGCAGGTACATCATAGGACTAGTCACTTGTGCTTTCATGG ATACTGCCTGGGTGGGGGTTCACAACACTTATAAGTTAGAGAGTTTGAGAGCCAGTGGAA AGTAAGTGGAAGTTGTTCTGAAATAAGCCCCTGGCAATTTTCTGCAATGAAAAGGAGCAG AGGTCATTTTCTTATAATGCTCAGCCTCAGAGATAGAACACTGCCCGCGTACTCTGGTTC GGGTTCAAGTGAGAGGCTTTTCATGAAAATCTTAGGATTGAAGAGCTCTAAGTTCAGGAT ATCTCAATGTTCAGAAAGCCTGACTAAAAGAAGCCAAACCAAAACCATTTAATGTGAACA 

Sequence 1424 TNGGGNNAAAACCATNCTTTNTNAANNNNTTNTTTTNANNCATNCGGGGANAGGNTTNAN CTGAAAANANNTTTGGGNTTTCAAATNAATTTTTTAAANCAAAAAAAAACTTTCTNCNAA TNTTTANNTTTTAAAAAAAAANATTTAAAAAAAAANGNTNTTATAAAAGNGGGNTTGAAAAA NNCNNTNNTTAGAAAATNANATTCCATTTTTTACNNGNTTNNNGTTTTTNGGTTAAAATA CNNTANCTNGTTCCTNAAAAACAANACCCCCTGNCNTTTTGNGTNATTNTAAAAAAATTN AAACTTTTTCTNAAATTTTTTNGGNAAAAAAAAAAA

# Sequence 1425

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CCTTCACCCTTTTGGG

Sequence 1426

CCCTTAGCGTGGTCGCGGCCGAGGTACGCGCTTCAGGGCCCTGTTCAACTAAGCACTCTA CTCTCAGTTTACTGCTAAATCCACCTCGACCCTTAAGTTTCATAAGGGCTATCGTAGTTT TCTGGGGTAGAAAATGTAGCCCATTTCTTGCCACCTCATGGGCTACACCTTGACCCCCGC GTCCTGCCCGGGCGGCCGCTCGAAAGGG

Sequence 1427

Sequence 1428

>Sequence 1

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TTACAGAGAGTTCCAAGAAACTATGATCCTGCTTTACATCCTTTTGAGGT
CCCACGAGAATATATAAGAGCTTTAAATGCTACCAAACTGGAACGAGTAT
TTGCAAAACCATTCCTTGCTTCGCTGGATGGTCACCGTGATGGAGTCAAT
TGCTTGGCAAAGCATCCAGAGAAGCTGGCTACTGTCCTTTCTGGGGCGTG
TGATGGAGAGGTTAGAATTTGGAATCTAACTCAGCGGAATTGTATCCGTA
CCT

>Sequence 3

>Sequence 4

>Sequence 5

GGCGGCCGCCCGGGCAGGTACCATGGAAACCCACTCTTTCATTGAAAGGA

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>Sequence 6

>Sequence 7

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GTGACCATCCAGCGAAGCAAGGAATGGTTTTGCAAATACTCGTTCCAGTT
TGGTAGCATTTAAAGCTCTTATATATTCTCGTGGGACCTCAAAAGGATGT
AAAGCAGGATCATAGTTTCTTGGAACTCTCTGTAAGTCCAACTTGGTTTC
GCGGACATAATTGTCCGGATTCCGGCTCAGCATCTTCACCTTCATCTCGG
TTGCTCTTC

>Sequence 8

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>Sequence 9

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>Sequence 11

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GTGGAGGAGGCAGAGCTCAGATAGAAAAGGAGGGAGTGACACTCAAGCTG
CAAGCAGTGACAGTGCCCAGGGCTCTGATGTGTCTCTCACAGCTTGTAAG
GTGTGAAGACAGCTTGCCTTTGATGTGGGACTGGAGTAGGCAAAGAGTTG
GTTCCATGCCCTTCCCCTTTGGTGGACCTTGGAAAGAACCCCTGGACTTT
TGTTTTCTGCCAAAAGGGCAACCTGGCAATGATGTTCTGATGGTTTCGTC
GTTAGGGCCATAAATGNTTGTAGGGAGGGTGGGGAGTAAGTAGGAACCCC
GCAATCCGGGAATCGCATCAACCCATAGGGCCCCCTTGATTTGTCTAAAC
GACCTGAACCCCTTGGTTGCCTTCAATTTGACTAACAAATTGTAACCTTA
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>Sequence 14

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GACAAACAAGAAGGAAAACTCTGAGACAGTGGTCACAGGCTCCCTAGATG
ACCTGGTGAAGGTCTGGAAATGGCGTGATGAGAGGCTGGACCTGCAGTGG
AGTCTGGAGGGACATCAGCTGGGAGTGGTGTCTGTGGACATCAGCCACAC
CCTGCCCATTGCTGCATCCAGCTCTCTTGATGCTCATATTCGTCTTTGGG
ACTTGGAAAATGGCAAACAGATAAAGTCCATAGATGCAGGACCTGTGGAT
GCCTGGACTTTGGCCTTTTCTCCTGATTCCCAGTATCTGGCCACAGGAAC
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ATTCTTTGGGCACGGGAGGAAAATTCATTCTTAGTATTGCATATAGTCCT
GATGGGAAATACCTAGCCAGTGGAGCCATAGATGGAATCATCAATATTTT
TGATATTGAACTGGAAAACTTCTGCATACCCTGGAGGCCATGCCC
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>Sequence 15

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CCAGTGCCTCTCCGATGGAGAAGTATCTTGTAAGGAAGCAACTTCCATAA
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CTGCGGCTGCAGGAAGAGTCAGAGGTTCTTCAGAAGAGTGTGATCATTGG
AGTGATTGAAGGTGGAGATGTGATGGAAGAGGGCTGAGGTCAGCACGAG
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GGGAGGTGCTCGAGTGTATTGAAAGAAGAGTGGGACTTATTTGAGAAGTT
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# Table 2

TACCAGCCCAATTCCGAGAGACCCTCTCCATCAAAGG

>Sequence 17

**ACATTCTATACCCCTTTGGCC** 

>Sequence 18

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GACTCCCTCCCACAAAACTGGCTCCGGATCAGGGAACACTACCAAACCAA
CAGCAGTCAAATCAGGTCTTTCCTTCTTTAAGTCTGATACCATTAACACA
GATGCTCACACTGGGGCCAGATCTGCATCTGTTAAATCCTGCTGCAGGAA
TGACACCTGGTACCTGCCCG

>Sequence 19

>Sequence 21

TGGGGAACGTTGTTCGACTCCGGGTGGCGGCCGAGGTACGATTCTACTGT

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TTTGTCTTCTAGGATCAACTCGGTCATTACCACAGCTCAAACCTGCTTTG
GGACTCCCTCCCACAAAACTGGCTCCGGATCAGGGAACACTACCAAACCA
ACAGCAGTCAAATCAGGTCTTTCCTTCTTTAAGTCTGATACCATTAACAC
AGATGCTCACACTGGGGCCAGATCTGCATCTGTTAAATCCTGCTGCAGGA
ATGACGCCTGGTACCTGCCCG

>Sequence 22

>Sequence 23

>Sequence 24

TGGAGTATCCTCACCGCGGGGCCGCCGAGGTACAAAAAAAGCACAGCCTG GCTCTGGGTTAGAGACATGCTGACTGATGAGATCACCAAGGCAGCTGCAA AGGAGAGTCCGGTAGTGAAAGGCAATGCGCTGTTAGCTCTAAGCAGCCTT GCTGTCGTCGTATCTAGACATGAAGCCAGCCTCTCCTCAGACTCTGACGG GCTCCTGGAGGTTCAACCTAATTTCCTTTCAATGAAAGAGTGGGTTTCCA TGGTACCTGCCCG

>Sequence 25

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TCAGTTCCGGCTCCAGCCATCCTGGGGTAGCTTGCCAATAGATGAATCCC
ACTCGTTTGACCCATGACGCTCCTTCTTTTCATTTCTCCCTCTTTTCCCCA
CAGCAGTGCATGTCCACCATACCACCTGAGAGTCTGTGGAATCTAATTTT
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CTAACTTTTTCTCTCAAAGGGATAGCTGCCTTGCTTTCATGAAAACACA
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CCTTGACAGAATTTATTAATAAATAGGGCCTTTCAAAGGGGAAACCGTTC
CAACATGCCTACAGAATGTTTTATAACCATGAAATATTTACTGGCGTTAA
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TATAATTTTGCAGGTGAATGGTC

>Sequence 26

TGGGATGTGCCTCATCGGGGGCGGCCGAGGTACGGATACAATTCCGCTGA

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## Table 2

GTTAGATTCCAAATTCTAACCTCTCCATCACACGCCCCAGAAAGGACAGT
AGCCAGCTTCTCTGGATGCTTTGCCAAGCAATTGACTCCATCACGGTGAC
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GCATTTAAAGCTCTTATATATTCTCGTGGGACCTCAAAAGGATGTAAAGC
AGGATCATAGTTTCTTGGAACTCTCTGTAAGTCCAACTTGGTTTCGCGGA
CATAATTGTCCGGATTCCGGCTCAGCATCTTCACCTTCATCTCGGTTGCT
CTTC

>Sequence 27

>Sequence 28

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ATCTGTAAAGCTCTTAGAACATGCATTTTTCTTCTACTAAATTTTAAGGT
CTGGCAGGCGCGGTGGCTCACACCTGGAATCCCAGCACTGTGGAAGGCTG
AGGTGGGGGCAGTGGGGAGCGAGGGGTTGTTACTACTCCAATGTAACTGC
TTTCTCAGAAATTAAGGCAAAAAGTCTTACTGACCATGTAAAGGAAATCC
AACAATTATAAACAGTCTCTGCCTTTAAGGAGCTTATAGTCTAGTTAAGA
AACCAGACTTAAACATATGAAAAGTTAAACATTGGCCAGGCACAGTGGCT
CATGCCTATAATCCCAGCACTTTGGGAGGCCAAGGCAGGAGGATCACCTG
AGGTCACGAGTTCGAGACCAGCCTGACCAGCATGGAGAAACCCCATCTGT
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>Sequence 29

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>Sequence 30

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AATCCAACAATTATAAACAGTCTCTGCCTTTAAGGAGCTTATAGTCTAGT
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ACCTGAGGTCAGGAGTTCGAGACCAGCCTGACCAGCATGGAGAAACCCCA
TCTCTACTAAAAAATACAAAACTAGTTGGGCATGTGGCGCATGCCTGTGA

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TCGAGCGGNCGCCCCGGCAGGACGCGTGGGATGN

>Sequence 31

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TCTGGCAGGCGCGGTGGCTCACACCTGGTAATCCCAGCACTGTGGAAGGC
TGAGGTGGGGGCAGTGGGGAGCGAGGGGTTGTTACTACTCCAATGTAACT
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CCAACAATTATAAACAGTCTCTGCCTTTAAGGAGCTTATAGTCTAGTTAA
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>Sequence 32

>Sequence 33

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CAGAGCTGGGTTAAAGCTGGGTGGGAGAAGTGAAAAAGGTCAGGTTTACA
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CAAGGCAGGGAGGCAGGGAAGTGGCTGCCAAACCTGTTGTAGGAGAGTAA
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>Sequence 34

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CCAGAGGGAGGCATAGGAGGGAAAACGAAGACTGAAAAGGGCTAATATGA
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CATTAAATCATTAAACATTCTATCCAAATAGGATGCCCTTCTGTGGAACT
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CTTACAGTATCTGTTTCCCACAATACTTGCAGTCATATCAGTTACAACCG
CTGGGTGTGTATTGGTTCAAAAGGACCTACCTACAAGGTTATATCAATCC
ATTGTCCAATTTGAGAGATTTTTTCTGAATCCAGTTAAAATAATTTTTGG
CTACACCTGGGGACACTTCCCAGGACAACAATGACTTGTAGTCTAGTGCC
CAAGAAAGCCAAAAAAGGCCCGGCAACCTTGGTTGCCACCAGATCCCCAAC
AGACAGATTCTAAGGGAGAAGAGAGTTTATCAACTAACACTCACAGG
>Sequence 35

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CCCCAGAAAGGACAGTAGCCAGCTTCTCTGGATGCTTTGCCAAGCAATTG ACTCCATCACGGTGACCATCCAGCGAAGCAAGGAATGGTTTTGCAAATAC TCGTTCCAGTTTGGTAGCATTTAAAGCTCTTATATATTCTCGTGGGACCT CAAAAGGATGTAAAGCAGGATCATAGTTTCTTGGAACTCTCTGTAAGTCC AACTTGGTTTCGCGGACATAATTGTCCGGATTCCGGCTCAGCATCTTCAC CTTCATCTCGGTTGCTCTTC

>Sequence 36

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>Sequence 37

>Sequence 38

>Sequence 39

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ACCTTTAAGTGGAT'AACTTGGCTTCTGGTTTGCCAAGGAACCAGGGCATC
AAACAGATGAAACAGCCTATTGTCCATTTCAACAGGATTTTTCAGGAGTG
GGGATGATCTTTCAAATTATCCACAACTTAATTATTTAATATTTTGATAG
TCAATTACCTAAGACACGGCATCGTCACTGACCAATCAGAAGAGATGCCA
GTAGTTGGGCGCAGTGGCAGCACTTTGGGAGGCTGAGTGGACAGATCACC
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CTACTAAAAAATACAAAAAATGAGCCAGGCATGGGGGGCACCTGTAATCCCA

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>Sequence 40

>Sequence 41

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>Sequence 44

>Sequence 45

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>Sequence 46

>Sequence 47

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>Sequence 48

>Sequence 49

>Sequence 50

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>Sequence 51

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CTAATCGGAGAAGGAGAGAGATCAACTTCCATCGACTCCAGTCTGTCGGG GGCTGATGAGTGAGGTGGCAGCAGGCATCCGCGTGGATTTGTTGAAACTG GACTTTTTATTGTGCTGAAAGCTGCTTGTTGTGATGATCTCATACTTTGT AGTTGTTCTATCTGCAGCACTGACTTCCTAAGGGATTCTTCCAACCTAGA AATCTTTTCTTCTATGGAAGGCTTACAATCTTTTTCCTGTGTTTTTTCTTG AAATTCTTAAAATTGGGAGGTTTTCCTGGAGTACCTGCCCGGGCGGCGC TCGAAAATAATCTCTCTGCTCCTATCTTAGGTTACTATTCCGGGGAGCCC TGGATACCCCTTTTTTTCCTTCCCACTGGGCCCCTT

>Sequence 52

>Sequence 53

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GATGCTGAGCCGGAATCCGGACAATTATGTCCGCGAAACCAAGTTGGACT
TACAGAGAGTTCCAGGAAACTATGATCCTGCTTTACATCCTTTTGAGGTC
CCACGAGAATATATAAGAGCTTTAAATGCTACCAAACTGGAACGAGTATT
TGCAAAACCATTCCTTGCTTCGCTGGATGGTCACCGTGATGGAGTCAATT
GCTTGGCAAAGCATCCAGAGAAGCTGGCTACTGTCCTTTCTGGGGCGTGT
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CT

>Sequence 54

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GGCCGAGGTACACTGGGAAAATGAAGAACTTAACTACATAAAAATAGAGG
GACAGTCAAAACTTCACAGGGGGGGAAATCAAGTTAAATTCAGAGCTGGAT
TTAGATGATGCCATTCTAGAGAAGTTTGCTTTCTCCAATGCTCTATGCCT
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CTATTCAGTCAATTCCTGAGGCTTTAAAAGCTGGGAAGAAAACTA
TCTCATGAAGAAGTTATGCAGAAAAATCGGTGAACTCTTTGCTCTAAGGCA
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ACTAACAGATCTAATGCGGAATCACCTGAATGAGAAGAGGGCACTTCGCT
TGGAGGGGAAGATTGTCAATCCTATTACCATAGAAGGAATGGTTGAGCTG
GGACCAGTTTTTTTTTGATCAGTGATACCAAGTGTACTGCAGAGATATTAA
GTG

>Sequence 55

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TCTTCTCTATTCTCATTACTCACGTTATCTCCTTCTATCGTTTCTTGTAC
AGTCGTTTATTTTTTTNGACTNCNNNNNTNNTTGTTGTTGACCTAGCTCCA
CCGAGGCGGCGCCCCCGGGCAGGTACTTTGCAAAGTGGATGCAGCA
>Sequence 56

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TTTCGATTGAGACTCTCCGAGGCGCGGCCGGAAGAGCAACCGAGATGAAGGTGAAGATGAAGGTGAAGATGCTGAGCCGGAATCCGGACAATTATGTCCGCGAAACCAAGTTGGACTTACAGAGAGATTCCAAGAAACTATGATCCTGCTTTACATCCTTTTGAGGTCCCACGAGAATATATAAGAGCTTTAAATGCTACCAAACTGGAACGAGTATTTGCAAAACCATTCCTTGCTTCGCTGGATGGTCACCGTGATGGAGTCAATTGCTTGGCAAAGCATCCAGAGAAGCTGGCTACTGTCCTTTCTGGGGCGTGTGTGATGGAGAGGTTAGAATTTGGAATCTAACTCAGCGGAATTGTATCCGTACCT

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>Sequence 58

>Sequence 59

>Sequence 60

GCACCGCACTAGGTGGGATGCTAGCCGGATCCGGACAATATGTCCGCGAA ACCAAGTTGGACTTACAGAGAGTTCCAAGAAACTATGGGGGTGCTTTACA TCCTTTTGAGGTCCCACGAGAATATATAAGAGCTTTAAATGCTACCAAAC TGGAACGAGTATTTGCAAAACCATTCCTTGCTTCGCTGGATGGTCACCGT GATGGAGTCAATTGCTTGGCAAAGCATCCAGAGAAGCTGGCTACTGTCCT TTCTGGGGCGTGTGATGGAGAGGTTAGAATTTGGAATCTAACTCAGCGGA

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#### ATTGTATCCGTACCT

>Sequence 61

TGGACGAATTGTTNCCGACTCACCGCGGTGGCGGCCGAGGTACACGTTAC
TGTTCCGTCGTATTTTGTAGTCTCTGTTCTGCCCTTTGGAACATCTCTTC
GGTGTTCCTGTGGGATCTCTCTACTGCATTCTACTTTATGTAATAATCTG
TTCAATAAATAATTTTTAAAAGGAGACAACAACGCCGCAGGTGATCTGGA
GGCTCCTGGAGGACCTCAGCGACTCAGGTCCAAGGAGGGCCGCAG
ATCAGGCTGAAGGATGGATCCACATGTTTAGAGGAGATCGAGAAATGCAG
AAGAGAGTGCAGCAGAGAAATGCCACAGAAAGGGGAGCTGGAGAAATC
AAAGCATGAGAGGAATTCAACCTGCTGTCACTGGAAGGGGTCCAGATGGA
ACGCTTGAGAAGAAACGTGTGTAGCATCTAGGAGTAAAGACTCGCCCTGG
CTGACAGCTAGTAAGGAAATGGGAACCTCAGTGCTGCAGCCTCAAAGAAT
TGACTTTAACCCACAGCCTGTGTGCACTTAGAAGCGGATGCATTCACAAA
TCTTCCAA

>Sequence 62

TGGGTCGTTGTCTTNTCCGCGGGGCGGCCGCCCGGCAGGACAATGATGGC TGTCAACTTCGTTTGTTTAAAAAAAAGACAATTTGAGCAGGACGACCCTCT CCAATCTGGGTAGCATGGTTAGCCTGTGCAGTAACAACGTAGGCTCGGAG GATGGGTACCT

>Sequence 63

TTACTAACCACGATTGGATTATTTACTCTATGATTTTAATTATTGCATAT

>Sequence 64

>Sequence 65

>Sequence 66

>Sequence 67

GATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTGAAGGATAAGAAATT ACTGTGTCAAATTACCCACAAGTTAAATGCCCATGTTCCAGACCTGTGGC TCTTAGTATCAGGCTTGTGATAGAGAAAAGGCTGCTATGAATTCTACTCA GTGTGCTTAGACCAAAGGAAACCACCACAGGGATTTCACAGGC

>Sequence 68

GGGCGGCGCTGACTTGGCGCTTGCGCATGCGGGAACTCGGGCCTGCCAA

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GTGGATGAATGGATGGCGTCACGGCCCGGGGGAGAGCCGGGGTGTTGGAC GGGCCGCTGGTGGCGTTAGCTGGCTGACTGGCTCGGGTGGGCTGCAGGGG GCCGATGGCGGGTGGCGGAGTGACTCTGCCTCGAAAGCGGTAGCGCNGAG GCGCCCGGATGGGGGGGGGGGCGCGGGGTGGTCGGGGAACGATGCCCAGN

>Sequence 69 GGTCCCATTTCATCTTGCACCCGCATACCAGGGATTGTTGCGAAGAATCA GTTGTGTTATATTGTCCAAATCATCAAAGATACCCTGAGGTAAATTACTT AGGTTATTATTGGACATATCCAGTCGATAGAGCTGCCTTAGATAAGAAAA AGCATTTGGGGGCACCCGATTGATGTGGTTATCTTGAAGATAAAGCTTCC TCAGGTTTGTGCCTGGAAGGTTTACTGGTGCAGCAGTCAGGGAATTCCGC ACCAGGGACAGCTCTGTCAAATTAACTAGGTTGAAGAAAACTTTGTCACC TAAACCATGATTGTTCAACAGGTTTCCATCTAGAACCAGGCGTTTTAGAC TAGTGAGACCTTGAAGAGATGGTGATGAAATAGTGGATATGCGATTATCA TCCAAGCGTAGTTCTTCTATAGTCCTGGGCAAACCCCAGGGAATTGTGCT AAGGTGATTACGGGACAGGAAAAGCAGTCGGAGATAGTTGCTGTCTCGGA ATGCTCCCTCTTCTATGCTAACTGCAGAGACAGAGTTGTCATCTAAATGT AATTCTTCCAGATAGGGAATTTTTGAAAGTGAATCATAAGTGATAGTCCT TATGTTATTTTCTTGCAAATGTAACTCTTTTACATACTTTTTGGGAGGTTG **GTAGGGAATTCATTN** 

>Sequence 70

GCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTGAATAAAAGGCT TTGGTTTCTCTGATGTCTTCCAATCAATCACACAGAGCTTGCCCTGATAC TCAGCCACACAGTCCAGCAGACCTATATAGTTTAAGGTTTCATGTTGAAC AGCACTTTCAAGAGCTCGCACTCCACTGACATCTTTCAGAATATGCTGGA CACTTTCAATGTAACCAGACTTGAGGAGATTTTCATCTCTCTTTTTAAG GTTTCCTGGGGTGAAAGTATGCTTTCCAAGGCTTCGTGGAACCGTTTCCC TTGTAAAAAGACGTTTGAAGTGTATTCTTTAAAGCCATCTTCTCCCAGTT CCAGAATCATCCGCTGTTTCCACCTCTCCAACAAGAAAACCTGTTGTTTT GTCATGGTCTGCTGAAGGACTCGGGTCACACTTGGTATCACATTCCTTTG CAAGGGGATTTTCAAAGGAACTGAAGGATCACTTGCATTTGGTTTATCAC TTCTCTCTGGATTGAAGATAGGAAACCAGTTTTGTGGCACTCGTCTGTCC TCACCTTGGTTTGGCAGCTTATGCTTGCTCACGGTTCCACAGAGCAAAGA TTTTTCTCCACCGATCCCGGGGTCTGGCCGACGCCTCTGGGTGACAAACA GACCTGACTAATTAGAGTTTTTTCTTGGCCCCTTTTN

>Sequence 71

AGGTACTTGAAGGATAAGAAATTACTGTGTCAAATTACCCACAAGTTAAA TGCCCATGTTCCAGACCTGTGGCTCTTAGTATCAGGCTTGTGATAGAGAA AAGGCTGCTATGAATTCTACTCAGTGTGCTTAGACCAAAGGAAACCACCA CAGGGATTTCACAGGC

>Sequence 72

AGGTACATATATCATTTATTCAAGAGGCAGATTTTAAACGTTTTTGTAAA AAGCTAAATAACACCCAGAGTGACTCAAAAAATTTCTCAACTTTGCCCAA 

>Sequence 73

GCGTTTGGAGCAACACCGCGGNGGCGGCTGGNNGNTCTACCGCCCCGAAG CACACTNGCACAAAAGGGACTTTTNNGATGGGTTATGCNNCGCCCTCCNN GNCCAGCNGGACCANCNATTTTTTCCTCCTCCTCTGAGNCTGCCTTTAAA **AGCTCATAACAGTAGAGATCAGTTGTCTCTGGTTGCAAATCTAACATATA** CCCGGGCGCCCCCCAGAACCAGGGGACCCCCGGGCGCAGGAAANCC CCAGCNNANGGGCCCCAGAAGGAGGGGGAA

>Sequence 74

NAATATGACTCACCGCGGTGGCGGCCGCCCGGGCAGGTACCTTGTGAGAA GAGGAAGAAGTGATAAGAACTAAGATCAGAGCATAGTAGAGAAAGTAGC

> Page 14 (of 261 pages in Table 2)

>Sequence 75

TAGGTAGCGACTCCCCGCCGTGGCGGCCGAGGTGCGCGGGAGGCGTTGT GGGAGGAGGTGCGGGAGAGAGGAAGGGGCCTGTGCACTGAGCAGGCATC AAACATTAGTGGATGGCCTTGCGTCTCAATCTGCAGTAAAGAGGAAACTA ATCTGAAAGGGAACGATAGGACTGTGTGTCTTTTTATTTTTTAAAATACG GAGTGTGCAATTTTACTGAATCTTGAATCATGCCCAAAAGAATGAGCTGT CGGTGCTGCAGTCGTGACCCAGGCTGA

>Sequence 76

GGTCTTGGCTGCCTGTGGGCTTCCCCAGGTGGCCTGAGGTGGCCAAAGG
GAAGTAACAGACACACGATGTTGTCAAGGATGGTTTTGGAACTAGAGGCT
TATTGGGGGGAGAGATCCCTGCAGAACCCACCAACCAGAACGTGGTTTGC
CTGAGGCTGTAACTGAGAGAAAGATTCTGGGGCTGTCTTATGAAAATATA
GACATTCTCACATAAGCCCAGTTCATCACCATTTCCTCCTTTACCTTTTA
GTGCAGTTTTCTTTTTCACATTAGGCTGGTTGGTTCAAACTTTTGGGAAG
CACCGGACTGGTCAGTTTCTTTTTGGGAAAGTGGGGTCATCGCATTTCCTG
CAAGGGCTTCTCCTCCTCTGGTCTTTTTGGGAAACCCGGGGCTTTTTTCA
CGGGGCTTTTAGGGAACTGGTCAGGCTGTTTTCAACCAGGAAG

>Sequence 77

>Sequence 79

GAGGTACTTTGGCCTCTCTGGGATAGAAGTTATTCAGCAGGCACACAACA GAGGCAGTTCCAGATTTCAACTGGTTCATAGATGGGCGGGAGAATGAAAA CAGATGGTGCAGCCACAGTTCGTTTGATCTCCACCTTGGTCCCTCCGCCG AAAGTGACCGATGTCCTTCCATATTGTTTACAGTAATACACTGCAGA >Sequence 80

GAĞATGCCGGGGGTGCCGATATACTGTGCAGAGGTAAAGGATATAGTGGC TACGATTACGGCCTCTCT

Page 15 (of 261 pages in Table 2)

TAGATAGCTCCCGCGGTGGCGGCCGAGGTACAGCCAACCCCCTAGGTGTG GACCAGCTGAGGCAGGTGGGCAGATATGCAGAGGGACTTGGGGCTTTGCC AAAGGGTAAGCACAAAGAAGGAGTCACGGGTTCTGTTCGAGGCACTGTTG GGATTAGGAGCCCGAGGGACCTACTTTGCAGGAACCTAGCATAACTTTGT GTGACGAGACTGCACAAGACAAAGCTCAGGCAAGTGGCTCAGTAGTTGGC CAGCCCAGCAGGGTCCTCTGTATGAGTGTGCACCCAGCTGAAGAGAAAAA ATGGAGAGCAGCAATTGGAGCTTCAGGACCGGCTTGCACTGTGGCTCCAG GTTATACCACCACTGCCCAAAGCAAAAGCTAGAGAAGCAAGTGGAGAAAT GCTGGAGAAAGCTGCACCCTACAGGCAACCAGCACTTTAAAAACCACTCC AGGCAAAGTAATGGAAGGAAAAAAGCCCTGCTTTTCAGTAACCTGGGCCT

>Sequence 82

GACACCATACGTCTCTGTGTATGATCTCNCTAAGTCATATCGTGTAACGT GTACACTTACTCATTCAGCATATATNTCAACGTCAACTTCTGTTTCTCTC AGGTTATTATTTCATAACTACTTATATCTGTTTCACATCAGTAACATCGT CATATCTCTACGTCTTTAGTGATCTATTGTATTTCTAAGAGAGACTCCGG TGGCGGCCGAGTACGCGGGGGAGTCAGTCTCAGTCAGGACACAGCATGGA CATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTACTCTGGCTCCGAG GTGCCAGATGTGACATCCAGATGACCCAGGCTCCATCCTTTCCTGTCTTG CATATTGGAGGAAGACAGAAGTCACCCATTAACTTGGCCCGAACAAGTTC AGAAGCATTTGCCCAGGGTATTATGTAATTGGGTTTTCAACCAAAAAACC CAGGGTATAAAGCCCCCCTAAAGGCTACCTTGAATCTTATAGCTTGCCA TTTCCAGTTTTGGCAAAAGGTTGGGGCGTTCCCCCAATTCTAAGGGTTTC AAGATGGGCCAAGATGGGATTCCTGGGGGACAAGGATTTTTTTACCTTCT TAACCCAATACAAGGCAAGTTCCTGGCAAACTCCTGGAAAAGAATCCTTT GCCAAAACTTTTACCTACCTTGGCCCAAACCAGGGAGTTTAACCAGTGTT TCCCCCCTTTGGGAACCGGTTCCGGGCTCGCCTTTCTAAGAAAACTTAAG ATGGGAATTCCCCCCGGGGCTTTTGCAAGGGAAATTTCTGATTATTCAT CCCCT

>Sequence 83

GATGAGTCGAGTGGCGGCCGAGGTTCCTTGTTGCAGCTCTTTATTTCTTA GTCCCACTCCCCGAGGTAACACATTTCTGCTTTTTTAGCTGTTTCCTCT AGTGTAGGTTCACCTTTCTAATTTTTGATTCAATCACTTAACCACCGTTA CATACTACAAAATATCACTATATTATGACCATGATTATATTTCTTTTCTT TTTCCCTTCATCAAGGAAGTTCATCAAAGAATTTCATCAAAGTTCAATGA TGACCTCTTTTTAAAATTTTCTTAGTATTCTATGTAACTATTACCGATCT TTAGCACAAATAACCAATCCTTTTTTTTTTCCCAATAAAAATGTGCCTTT CGTAACCTTTGTCCTCTTTTTTACCTGGAATATTGCTTTTTAAGGCTG TTGTGCAACTTAGAAACTTATTTCTTATTATTCTGGGGTTTCTTTTCCCT TTTTTTTGTCCTGGAATCCCTTTTGCCGGAACCT

>Sequence 84

CTCTCTTTTCCTCTTCTACTAGTACATCATACTAGAGTATCTNTGTATTT TCACACTGATANGGTAAATCTGTAATAACATTATTCTTTATAATGATAAT **AATCTAATTCATGATCAATTATCTATAGATCGAATCTATACTCTTACATC** TCGACTCTACGATACTTTAATATAGAGATGACTCCCGCGGTGGCGGCCGA TGTACTATGGCCTATATGGGATAGAAGGTATTTACCACGCACACAACAAA CGCAGTTCCATATTTTAACTGCTCATCATATGGCGGTAACATGGGGACAT ATGGTGCAACCACACTTTCATTTGATTTAACACCTTGGTAACCCCCGGCC GCTCCTAGAAACCTAATTGGATCCCCCCGGGGCTGGCAGGAAATTCGAA TATTCAAAGCTTTATTTCGATTACCCGTCCGACCCTTTGTAGGGGGTGGG GCTCCCGGGTAACCCCAAACTTTTTATGGTTTCCCCTTTTTAAGTGGAAG GGGGTTAAAATTTGCCGCCGGCTTTGGGGCTGTTAAATTCAATGGGCTAC AATTAGACCTTGTTTTTCCCCTTGGTGTTGGAAAAAATTAGGTTTAATTT

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>Sequence 85

>Sequence 86

TGTGAGACTCCCGCGGTGGCGGCCGAGGTACATCCCTGTTTATCCCATTC
CATCCACCGAGGCCCAACAGCATGGATGATCTGTTTGCAGGGAAGCCTCC
CTGCTCCCGTGACAGCTATCTCACCAGCTGACACTTTACCATATCTGGCA
ACAAACTGTTTGCTCTCTTCTTGGATTTCAAATCCACCAGCTTTTACCAG
GGCCAGGGCCAGGCCTCCCCCATGCAGAAGATCTTCATTGGCTGCATTCA
CCACAGCATCAACAGCATGTGTGGTGAGGTCATCTTTCCACACTGATAAC
TCTATCCTAGGAGTCAGCATTTTTCTGAACACTTGCAGAGATTTGCTGTT
GCCTTCCTGAACTGGAGAGACCAGGGTAGAGATACAGCCAAACTTATTCT
GGAGGACTTCACACAGCTGACGCTCATTATTGTTTAAAATTTTGAAGTCA
TTGTGGTTAATGGGAAATTTGCCAACTATAGTTTTCCCAAGAGCACCAA
TCTCTGATTTTTCATG

>Sequence 87

>Sequence 88

>Sequence 89

CGGTCAGGTACCGCTCAGCCTGCTTGGTTGCATCCTCCGCATGGCGAGTC

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## Table 2

>Sequence 90

AGGTACGCGGGATCACAAAGCAGACAAACAGGAAAGACTGAACCATCTAT
TTGAAAAAAGTGACTTCATTCAATTGGTTCAGCCACCCGTATCTGTAATC
TCTCCATTCTGCCCTCTTGATTTTAATGCAGCTATAAAGGAGAGTATTTT
AAAAGTGCCTCCCAGTAGGAAGAACAGTCACAAGGCACTGTTATATCAAT
TCAGTGTGACACAAGCCCTGATTATTTAATAGTATAACAGCAGTGAATCA
GAGTTCTTTCATCTGACTTTGCTGACATTTCCAGCAGCTGTATATTTAAT
TCACAGTTAGGGGCTGAACAAACTACAGCCATTGATCAGAATGTAAGCAG
GCATCCTTGAGCTTCTTCTAGGAACATATACAGATGTGCACAAAATTTTC
ATTTATTCAGTN

>Sequence 91

GCGATTGGAGCTCCCCGCGGTGGCGCCGAGGTACGCGGGATCACAAAGC
AGACAAACAGGAAAGACTGAACCATCTATTTGAAAAAAAGTGACTTCATTC
AATTGGTTCAGCCACCCGTATCTGTAATCTCTCCATTCTGCCCTCTTGAT
TTTAATGCAGCTATAAAGGAGAGTATTTTAAAAGTGCCTCCCAGTAGGAA
GAACAGTCACAAGGCACTGTTATATCAATTCAGTGTGACACAAGCCCTGA
TTATTTAATAGTATAACAGCAGTGAATCAGAGTTCTTTCATCTGACTTTG
CTGACATTTCCAGCAGCTGTATATTTAATTCACAGTTAGGGGCTGAACAA
ACTACAGCCATTGATCAGAATGTAAGCAGGCATCCTTGAGCTTCTTCTAG
GAACAAATACAGATGTGC

>Sequence 92

>Sequence 93

GCGATTGGAGCAACCCGCGGNGGCGGCCTGNCCGCCGCTACNNNAATCAN GGAANCNNNGCTNNNNGNCCAGATGCTTTGNCGNTTCTTTAGACACAGNG GCTNNNGCAGNNAAACCCNACGTTTAGAACNGGGGGGCAGACCCCGAACG NCNAGAACAGNGGACCCCCGGGCGCAGGAANNCGAACAAGCNAANCGANA CCGNCGACCNCGATTTTGTTTTTTTGCCGGAGCNNGNGNGCCCNCTCCCGA GGGAAAAAAGCGCGCTCNGGCGAAGG

>Sequence 94

TGCCCGGGCAGACACAGCTCCATGAGGTCACCAAGCATCCCATCACCCAT ACCGGCAGTTGCATGGCAATGGCTGCCAGGCAATGGCACATCAAAATCCG GGCAGCGTCTTGAGCACTGTGCAATTGAGTCAACAAGGTCTCAACTACTG ACTGGCTAAGATGGGGCCTGCCCTTGGCCAACTTCACCATACAGTTTAGA GCAATCTTTAAAGTGGCCTGAGCACCTGGACTATCATCTTGACTACAAAG TACCT

>Sequence 95

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#### Table 2

CCCATTGAAATGTTGATAATATAAGGCATGCATGAATAATTTTTTGCT

>Sequence 96

AGAAATGTCGCCAAACTGCCGTCTTCCCTCCTCGGCCGCTGCGACAAACA CCCACAAAATGGCGCAGCGCCGTCGCCCTAGAATCCCCCGAGTCGCCT CTCCCGCGTACCT

>Sequence 97

GTATGTCGTTGAGCTCCCCGCGGTGGCGGCCGAGGTACCTTCCCCTGAGG AGCCCCCTTCAGAGGGCGAAGAGCAGTATCTTCAGAGGCCATCCAAGTT TTAGCATAACAAGGAGGGAAAGAGAATGCAGAGAAGAGGCTGGTGATAGA CAAGTTTCATGTTCACAACTTGAATTGCAGAGGTCAAGAGTTTAAAGAGT TTGGGATGGAAAGAAATCGAGAATTGGGCT

>Sequence 98

GGTTCGATGGTTGAGCTCCCCGCGGTGGCGGCCGAGGTACCAGCAGAGAT
GGCTTCAAGATGATTTAGGACTTGGGTCAGTAGCACTTACTGATGTAGTG
GTTTGATACACACTGATTACCTTCTTCCTTTTTTTATTCTCTGGCATTTCT
CCTATATAACTAGCCACTTTTAAACAATATTTGTCGGCTCTTTTCTTCTG
CTTGTCTGTAAATATTAGGGTTCCTGAGTCCTTACCTAGATTTTCTTCTC
TTCTTACTCCTGGCCTTTCCTTGGGAGAGTTCATAATTCACCTACTCCAT
CTAGATATTTGTGATGTCCAAACACATCTCCACGTTAGGCTTCTATTTGT
AGCATCAGACCCACACTTTCAACTGTCCACTAGATAGCCTCACTTGGATG
CTCTGCAGGCCTAAATAACCTTTGCGGACAGATTAACAGGGAAAAAATAT
TAATAGGAAAAAAATATTAGATTTTTATCTGATGTTAATATTTCTATGTGG
CATGGAGGACTTCACAGANAAAAGTGAAAACTCTAAAGCAGTTAGATTTG
AGN

>Sequence 99

>Sequence 101

>Sequence 102

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#### Table 2

GAAAGATTCTTGAGAACTCGTGCATAGGAATGAACTGCAATAAGGGCAGA TTAGAGAAGAACTAGGCCATGAGGGCCTAGTATCCAGAATGAGGCAGAGG GAGGGACGCTGGATGTGAGCAGC

>Sequence 103

TTCGACGCGAGATGAGCTCCCCGCGGTGGCGGCCGAGGTACTCCTTTCTT GTTTAAAGCCTCACCACTGACCAGGAAGTCTTGATAGAGCCATCTAGTAA TTCTTAAGTCCTACCTCATCCAACCTTGTTTTGACTCCTGCAGTGAGCAC AGCTTGCCCTCACCCTCCCCTCTCTATGCCCTCACCTTTGCAGGAGACTC TCAATTTCTCAGTCCACATCAGCTCTCAGACCACCAAAGCAAGGGTTATT TTTTCTAAAAGACATTTGTTCCCAATGTTCCTCTGACTAAAGTTCCCTAC TTTGGGACATTTGCCCTTGGCACCTCAAGGGCCCTTCAAATACGGTTGAG ACCGAAAATTTTTTAAAACTCTAAAACAACCTTTGAAAAATTGAATTTGG TGTAATTCCGCCCGGTGGAAGACCCCCCCGCCCCTCTTTTTTGGGGCTAT ATTTTCACCTTACCCCGGGGGGGGGGGGGGTTCCCCCCAAAAATCTCAAA TTCCCTTATAAATTTTCAGCGCGTGGACACACACTTTCTAAATCGCGCGC GGGGTGGGGGGTCTATTTCTTTCTTCTCTCTTCTTCTTGTGTGGGGGGC CG

>Sequence 104

TCGAGTGGATGAGCTCCCCGGGTGGCGGCCGGGACACGTAACAGGGTGGT TGCATGCATTCCTCAAGTCTGTATGACTCTACCAAGATACTGTGAAG

>Sequence 105

GACGATGTGAGCTACCGCGGTGGCGGCCGGCCGGGCAGGTACTTTCTAGG TATATCATGTGCCCTAATGTGCTCCTAATATCATAAATGTTTACTTTCCG AAAAGTATTTCTGAAAGGGAGCATATTTTGGAAAGTGCATAGGCTTGTAA TCATACTTGTTTTCAAGTTTCAACTTTGCTATTCAACTAGAATAATCTTG TGCAAAACCTGAGCTGATTTTCTCATCTATAAAATGGAAACAATACTTTC TGTGATAATGGGTGCAAAACACAAGGTATACTGGTTTCTTTGCTCTGGAT TCAAGTTTTCTTCTTAGTTTCAAAATTTTAAAGGGAAACCAAAAATGTTT CATGGCCCAACTTTGCAGAAAAGGATTTTTCCTCAAAAAAGAAATTAAGG GGGGGTTTTTTTATGGGACCCAAAAGGCGTTGTGGCCAGTTTTAGTAATT TTATAAGTTTTGGGACTCCTCTAACACCTTTTTATAAAGCGCCCCCTTGG 

>Sequence 106 TTTTGCGTGAGCACCACTCGTCCGGTAGTGGGCAGCGATCAGGGCTGGGG CTCTTTCCTGAGTTGTCAGGTGAGAGATTGTGAGAACTTGGCTTGCAG GGTTTGGGCATCAGCTGCCCATTGAGGGGCCGTTCATTGTCTCAAAGTGA ATGTGGGGTGGTTTGATCTGCATGTGTCATTTGTATCCACACAAGTTAAT TATTCTGCTTTTGTTGTAGTACCTTGGTTGTGAAGCAGAAGCTACCAGGC GTCTATGTGCAGCCATCTTATCGCTCTGCATTAAGTAAGATGAGGATTCA CTCTTAATTTATGGGCACAATTTAGTTTCTTCCACACAAATTTAGGCCTT AACTCTTTTATTTTTTCCTACAGTGGGGGTTTGGAGTAATATTCATACGG CATGGACTTTACCAAGATGGGGTATTTAAGTTTACAGTTTACATCCCTGA TACCTCTCCAGACCGTGACTGTCCAGTAGTTGGAGCACAGTCTGCTTTAT TGTGGTCCACAG

>Sequence 107

TGTTTTTGTGGTCACCACGCGTCCGAAATAATTGCAGAGAAAGCTTGCCA ACGGTGATAAGTAGGTTTGTCTAGCAGCACTGATGCGTCGTGGAAGTTGA TGGTCATGAACATACAGTGTGATAACCTATCTGCCCTCTTGACCTTTTCT AGTAGTGCTATGTCATTTTGGTACTAAGGTAGGTGAATTTTCCAAGTGTT CTTGGAAATAAGGAAACATCAAGAATAATGTAAAAGCCTCATATACAATA ATGAATAATAAAGAATAATGTGAAGGCTTCATTCAAGGTTGGGGTTTGCC AGATACATTGCAACAAAATGACAGAGCAGCCAAGGTATTTAGGATAGTGG CCAAAGGATTGTAATGATGGCTTATGGAAGTGTCAGCTGGATAAAGAGTG AAAATGAATAAAAACTAATGGATTGGTTCAGTCGAATAGCAGACGGCACA ATGGCCCATGGCCCGTTAGAATAGGGACCCAATTAAATGGAGACCAGTCA AGTGGGGGGGATCAT

> Page 20 (of 261 pages in Table 2)

>Sequence 108

TAAATGTGCCCACCGTCGAATGGATTCTACATCAGGTGTCTGTGCCTCGC TGCTGAAGGATAACCCAGAGTGCAAGGTCATCTTTGTTGCTGAACAGGGC TCCCCCAGAGAAATTGGCTCCTTATTTTTCTTTACCTATTCCTAGACTTC CTTTTGTCTAGAGCCAGTTTTGCAAAGGGCACTTTTATCCATCTCAGTTA TTCCCAGAGGTGACAGAATGAGTAAACCATATGGGGCAAATAGCATATAT GAGCTAAACCAGTTAACTGTTAACCAAGGCACATGGTCAATGCCTTAGTA TTTTTTTTTTAATTCTTCTAACGGTATTTCTAGCTGTACATTCCCAAA GGAATGGTTGGAAGCAAATCGATTCTGGAAGGGTCAATGGTCTTCCAGGT TAGGGAGAACCCAGTCCAAGGGCCGGGGACCTTTTTTCTTGGAAGTGCTG` **AAACCCGAGTTTTTC** 

>Sequence 109

GAAAAGATGTGGAGCTCCCACGCGTCCGAGACACTTCTCTGACTAACCAT AGACTATGTGGAAAATGGTAGCTGGATTGCCTTTGGGTGGAGTCCTTGCC CTGTGGCATAGGAAACAAAGGAAAGGAGAGAGAGATGCCCTTTGAGATTAAT GAAAATGCTCTCAGCCAAATAAAATCTAAAAATAGCCTCCTTGTGATACG AACGCGTGGCCCCTAAGGGTCCTAAAGAGAGAGCTAGGGGAGGTTCAGCT GGCCACAGAGATGCTAAAGGTCAGGAGCAGACTTTTAGGGTTTGCTGTTT TATAGGTTTAAAGACCAGGTCTGTGTTTTGATAACTGAACTTGCTAATAG GATTCAGCCAGTAATAATGGGAAGAGCTGCAAATGACTTCCCCAGTTGGG AGTGCCTGCTTGTTTTTCCTTCTGCCTGGGCATGCTGATGTGCAGGCCAC ACTCACAGACTTACACGTCTGAGGAGATAGCCC

GTGACTAAGACTTTCTGGACTATCATCATGTTTAGGAGTTGATGAGATTA TAGTTTCATGTAAGTGTATCATTAGATGACAACTCTACATCTTTAGGCAT GGAACAACATTTTTCCTGGAAGAAAAAAAGTGAACATCCAACCTCCA TTTAAACAAATTTGATTGTTTCTTTGCTATTAAGAAACTCGGTGCTCTTT CTCCCACTCTATTATATTGTCAAAATACATCTGGAGACACTATATAAACT TTTTCTCCTTTAAATTACCTGGTTTATATATTATCTCCTGTAGCCTGCAT ATAGATAAAGGTTAAACATAGAGGATTTAGGTTGTTGGTAATTTAATAAA TATCTTCTTTTTACAAATCATATAATTTTTGTTGTTGATTTTTTAGAGAC AGGAGTCTTGCTATGTTGCCCCAACTAGTTTGGAATGCCTGGCTTTAAAG **GGAATCTTTACCTTAGCTTTTTTGAGTAGCCGGCCTACA** 

>Sequence 111

GTTTGAGGGCGACCACGCGTCGCGGGATTGGACCGACGCAGCCATGGTAG GTCCAGATCCCGTAGAAGGGAGCGGGGTCCCATAGGTTACGGCCGATTCC TGGAGCTTCTGGACTGAGGGCCGCGGTAAGCAGTGGTCTGGGCTCCCGC

>Sequence 112

GTAAGAGGCCCGTGGCCGAGCGGTTTGCATCGCCAGCTCGCGCAAGGCC ATGAGGTTGGTCTGGGTGAAGAACGCATCGATGGCGGCACGGGCCTGTTC CGGCACGTAGACCTTGCCGTCACGCAGACGCTCCAGCAATTCGCGCGATG GCAGGTCGATCAGCAGCAGCTCATCGGCTTCCTGCAAGACCCAGTCAGGC **AAGGTCTCGCGCACTTGCACGCCGGTGATGCCGCGCACCTGGTCGTTGAG** GCTTTCCAGATGCTGGACGTTGACTGTGGTGAATACGTTGATGCCGGCAG AGAGCAATTCCTGAATGTCTTGCCAGCGCTTTTCGTGGCGGCTGCCGGGG GCGTTGCTGTGGGCCAGTTCGTCCACCAGCACCAGGTTGGGCTTGGCGGC GAGCAGGCCGTCTAGGGCCATTTTCTTCAGCATCACCGCGGTATTTGG AGCGCACAACCGGGTTTTGTGGCAGGCCGCTTACCAAGGCTTTCGGCTTG GCGCGGCCCTGGGTTTTCACCACCCCGG

>Sequence 113

GGAGATGTCGCCACGATCGGGCGCGGCCAGCCGACTGGACCCCTTAGCCT CGAGGCCTTTGCTGAAGCTCATGTGAGGGGGGCGACTGCCCCTGACAGGTG TTGGATTCCAGCTGCTGTGGCCCTGAAGGTGGGTGGTGGGAAGAACGGGA

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### Table 2

GAATGAAGCCAGCCTTGGGAGAGGTAGGACGCCAGCCCGGCCCAGCTGCT
TCCAGCATCTGGATCCAGCCTCACCTGAAGCCAGCCACCTTCTGGACTGC
AAAGTCATTGTCAACACCGAAACACAGGGTTTCTGACCATTGCAACCCAG
GGTCCCGGCGTGTCGTGGCTGCAGACCCTGCAGACCCCTATGAAGATGGT
CCTGCCTGCCTTGCATCGGGCCTCTAGCTAGGGACTGTGGTTGCAGACGT
ATTTCTGGGACTGAGCCTCTGGTTAGAGGCCAGTGGTGAGGGAAGAGAC
CCATCAGAGAAAAGAGTGGAGCCTCGGGCTTGTTAGCAAATGGCAGAAAC
CCGACCCTGCAAGAGGAAAACATTG

>Sequence 114

>Sequence 115

TACGTATGACTCACCGCGGGCCGGAATCGTTGTACCAGACCAGGCCCCCA GGGCCCAGCTACTCGAAGAACAGCCAATGGATTGGAACGTCCTAGGACAG ATGCCACGGCTTTGACCCAGGCTGGGGGTGCACGGATCTCACTGGGGTTA GTTGGTCGGAGGGGGAAGCCCCATGGGTCCACCAGGATGAGGTGTTTAAC TCTATCAGGGTACCT

>Sequence 116

>Sequence 117

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PCT/US00/33312

GCCATCATTCAGAACGGAAGGTTCTGAAAAGCACATTCAGATGATGAAAA GGGGGCAGAGAAATAAAA

>Sequence 119

TAAAGCGACCGCGGTGCCGCCGAGGTACCTGAACACCAGGCTCTTTACG
GTCCCTGGCCAGTGAAAGGGTCTAATATAAAACACACCGAGGCTGAAATA
GCCGCTGCTTGTGAGACCTTCCTCAAGCTCAATGACTACCTGCAGATAGA
AACCATCCAGGCTTTGGAAGAACTTGCTGCAAAGAGAAGGCTAATGAGGT
GCTGTGCCATTGTGTATGTCTGCAGATTTCCCCAGGGTTGGGATGGGTTC
ATCCTACAACGGACAAGATGAAGTGGACATTAAGAGCAGAGCAGCATACA
ACGTAACTTTGCTGAATTTCATGGATCCTCAGAAAATGCCATACCTGAAA
GAGGAACCTTATTTTGGCATGGGGAAAATGGCAGTGAGCTGCATCATGA
TGAAAATCTGGTGGACAGGTCAGCGGTGGCAGTGTACCTGCCCGT

AGACTGACCGCGGTGGCGGCCGAGGTACCGAGCTACCAGGCTGTGGAATG AGACCGGGAGCTTTTTCGTGCTAAGATGCCGTTACGGAAACATCGCTGTC GTTTCAAGAGCTATGGGCATTGTTTCACA

>Sequence 121

>Sequence 122

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>Sequence 123

GTTGATGCTCACCGGGTGGCGGCCGCCCGGGCAGGTACGCGGGTGTGCAA
CTGCAAACCAGTAACCTGCTATGGCCAATTGTGAAGAGATGGGAGTCTCC
CCGTATTGCCCAGGCCGGTCTCAAACTCCTGGGCTCAAGCAATCTTCCCG
CCCCACTTCCCGAAGCCCTAGGATTACGGGAGTGAGCCACCGCACCCAGC
CAGAAAAACGTTTCAAATATTGGAAAACCTTACTTTTTTCAATGAGCATT
TTTGCATCAAGGGGTAACAGGGACATTAGGCTTTTTTTCTCTTAGACTCC
AAACAGTAAGGTCAGAATTTATCAAGACATTACATAGGAGTAAGGGCACA
GCCAGGGGTGGTGGGGNGGAAGGACATTTTCCAGCACTAATTAACAGGTT
TTATGATTCACTAGGTTGGCCCAACTACTGTTCTCACCTAATTCCCAGGC
CAGCGTGTCAGGAGGCCAAATGACACTNTCCAGTGCAAGTGCTTGTAGTA
TGAAGGGGGCAGAGATCACCTAGTGACCA

>Sequence 124

AGAAATGTCGCCAAACTGCCGTCTTCCCTCCTCGGCC

>Sequence 125

TTAGAGATGAGCTCACCGCGGTGGCGGCCGCCCGGGCAGGTACAGACTTT
CATTCAACAAATATTTATGCATCAGCTACATGCCAGGATCTGTAATAGAT
TCTGGGTGTGCAGTAGTGATTACTGCAGAATGCAGACATGGTCCCTGCAT
TCTTGAGAGGGAGACAGCAACCAAATAAACAATTACAAAAAAGTATGTAA
CTAATTAACAAGTGGGAGAAGGGAGTGGGATTACACAGCAGAAGTGGAAG
GAAGGGCCCACTTAGAGTGGTCAAAGGCTTCTTGAAGGTAACATGTAAGC
TGAGACCTGAAGAAGGATGCAAAAGGGCCAGCATGTAAGGAACAGAGAAT

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AAACATCCCAGAAATAGAAAATAACACACAAAAACCTAAAGTCATTAAAG AACATGATCATCTTTCAAGAACTAACCCTTGAGATCAGAGTAGTTTGATT ATAGAGGAAAGGGGTGAGTGCAATGAAACGTTAAAAATAGCCAGATCACG TAGAGCTCTCTAGCCTTTGGTAGAAAAGG

>Sequence 126

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>Sequence 127

ATATGGCTCACAGCTCGGCGGGGGGGTACTGAAAGTGAGGTGAAAAAAACA AGAAAGCTGAGAGAAATCAACATGTTCCCAAGTGCTGTATGTGAACAATA AATCTGAGACATACCTCTAAGGCTTTTCCAGAGACAAGAAAGCTCTCAAC CTGTAAAGAATTCCTGGGACATGACTGAGAGCAATGAGAACTCCAGGCAG AAGGTTAGCAGATATAGTGTAGAGCATACACAGATATACTATAGTTCATA ACACTGGTGGCTTAGCTGTAAATCACAAAATAGCACTGGAATTATACTAG TGATCATAGCACATAGTCCAAGAAGAAAAAATTTTGATCTTGTTCTTAAA CTTTGTGGAGCCAGTGGTGAAATGAGTCACACAAAGATGCAACAATGNAT GAACCCAGCCCTCTTTAGACTAACATATTCTTGCCCATCACCACCAATAT TATTGCTTACCTCAGTCTCTATGGNTATTTGATGCAAAACACCCAGCATG CAATTTGAATCAATAAGACATGGAAAGGGAGCAAAATGTAACTCATGCTA AAGAAAAAAAAGAGTGAGAAAGAGACAACAAAAGCAGATCCAGAAATGT TAAAACTTGTGCATTATAAGGGAGGGAGCTTTAAATACAATATTNTAATT TAGAACATCTAGTGAAAATGTGATCAGATTTATCAAGTAATGGAATTTGA ACAGAGACGTAAAATGCTATATTTACAATNCATATTTTATATAAAAAGAG TTGTTAAAATAAAATTGTAAAAAACAATGTTTCAAAAATAAGATTATGTN **GATGGCTTACAGTTGAATAAT** 

>Sequence 128

GTGAAACAATGCTCATAGCTCTTGAAACGACAGCGATGTTTCCGTAACGG CATCTTAGCACGAAAAAGCTCCACGGTCTCATTCCACAGCCTGGTAGCTC **GGTACCT** 

>Sequence 129

GAGACTCACCGGGTGGCGGCCGCCCGGCAGGTACAGTCAAGGCCGAAAAC CAGCTGATGAACTCTTCATATGCCTCCTTTTGGGTGTCAGTGGAAATGTC ACTTCTTTCTAGAAGCTTCTCTGGCTCTCCCAGCCTGGCCCAGGGCTCCA GCTATGAGCTTCCATAACACCCCTAGTTTTCCTCACATTGCCCTCATAGT ATATGGAATTTGTTCATTCAATTGCCTGGCTTCCAACAGATGCCAGCTCC AAGAAGGCAGGAGCTGCTTCTGGGTATTGCTTGCCATCAAGGCCCTCACA CCCAACCTAATGCCTGGGCCAGAGTAGGTGCTTAATAAAAAATTGTTTGA GGCCGGGCGTGGTGGCTCACGGCTA TAATCCCAGCACTTTGGGAGGCCAG GCAGGTTGGATCACGAGATCAGGAGATTGAGACCATCCTGGTTAACACAG TGAACCCCCGTCTCTACTAAAA

>Sequence 130

**GAGACTACT** 

>Sequence 131

GACAGTGAGCTCACCGCGGTGGCGGCCGCCCGGCAGGTACCTATCTGCAG

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TTGGCGGACGGACCTTGAAGATGTTCTGGGCGGCCAGCACAATCGCCGC
CTTGCCGACGATGACATTGTTGGCCTTCAGCCCGTCAATATCGCCCTTGA
TGTCGATGTTCTGGCTCTCCTCATCATGGCTCAGCGCAATGGCGGCGTTC
GCCTTGCCGGTCGCCTCCACGAGGAACAGGGCTGCGGCCGTCGACACATC
GCTGGACGCGAGGGTCAGGTTGCCCTGAAGCAGCCCCTTCTTGTCCTGGG
TGACATCACCGCGCAGCCGCGTGCCGCCGCAATGAACTGGATATTGCTC
AGGCGTTTTTCGTCCTTGTGCAGGGCAAGTTCCGTGGCAAGATCGGCCCG
CACGCCGTCGAGGAACGCCAGACCGGATACCTTGCCGTCCGCGCGTCCTT
GACAGAAGTCCGTTGAAGGAGAACGCGCCTTCCTGAGCTTGCCCCGGAAA
GTTTGCCATCCGGAACCCGGCATTGAG

GATATCGAGCTCCCGCGGGGGTGGCGGCCGAGGTACGATAATTCATGCCA
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GAGATGATTTTTAAAATGCCATGCAGTTATTTTTTCTGAATAACATAAAT
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TAAACTCAATAGAAATAATTTAACTGCCTTCTCTCACAAGAGGCAATCA
GAAGGCAGGACTATAGTTTTCTGTGTTTCTTTTCCACAGGAGAGATAATT
ACATTTCTAGAGACCCATAGAAACAATTCCATAGTTTTAATTTCATCTC
CTATCTCTAAGGGTGTGCCAGGTATCTAACAGCAATTATCTTACATTGC
TGAATCAACAACAATGATATCACTGAAGAAATACAGGGAGACCCAAGCTT
CCTTGGATTGGCCCCCCCAAAAATTGGTGTAAACATTTTAAAGGAATGGCT
TAACTCTAAAGAAAGGGAATTTTCTTTTTTGAAAAAATT

>Sequence 134

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>Sequence 135

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>Sequence 136

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>Sequence 137

TGTTTGTGGATTGACACGGGCGGCGGCCGAGGTACTAAATTTAGCAACTT

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>Sequence 138

>Sequence 140

GAAAGTAGGGATTGAGCTCACCGCGGTGGCGGCCGCTGTGAAACAATGCT CATAGCTCTTGAAACGACAGCGATGTTTCCGTAACGGCATCTTAGCACGA AAAAGCTCCACGGTCTCATTCCACAGCCTGGTAGCTCGGTACCT

>Sequence 141

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CATGAAACTTGTCTATCACCAGCCCCTTCTCTGCATTCTCTTCCCCCCT
TGTTATGCTAAAACTTGGATGGCCTCTGAAGATACTGCTCTTCACCCCTC
TGAAGGGGGCTCCTCAGGGGAAGGTACCT

>Sequence 142

>Sequence 143

>Sequence 144

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>Sequence 145

GAACGATGGGATTGAGCTCCACCGCGGTGGCGGCCGAGGTACCGAGCTAC

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CAGGCTGTGGAATGAGACCGTGGAGCTTTTTCGTGCTAAGATGCCGTTAC GGAAACATCGCTGTCGTTTCAAGAGCTATGAGCATTGTTTCACA >Sequence 146

TGGACGACGGAATTGAGCTCCCGCGGTGGCGGCCGTTCTGCTTAGCCAG
TTTATTCTTTATTTTTTTACTGGAGTCATTGCCAGTGATGGAAACGGTGT
TTGCTTCTCTTTCAGTCAAGATCTGCACAAAGTATAGCATTAGGTGGTAT
TTATTGTTTATATTATGAGTTCTACATTCATCTTTCCAGCACTCTGAAGT
TATCAGCAAGTTCTCAGTCAGTTCAAGGCATTGGATTCTGCTTGATTTCT
TTTTAATTCATTGTTTTTTGACCCCTTTGAGAGTTTTAATAGAGAGGAGTC
TGGAAGGCAGAGATCTCCACCACCTAACCGTGAGAAATTTGGAACTAAGG
ACTTGCACTGGTCCCCAAGTTAACAGTGGATATACTTCCTGCATTTTCTC
TGGTCTTTCTTGCATTGGGCAAAATGAATGAACGGGACCAGAAGGCCCTC
ACCCCTTGTGGCATTTCCAAGTGGACAGGACTGGGACCCGGGATTGGTTA
AATAACCCGAAAAACGG

>Sequence 147

>Sequence 148

>Sequence 149

TGCGTGTTGGATTGAGCTCCCCGCGGTGGCGGCCGAGGTACCTTCCCCTG
AGGAGCCCCCTTCAGAGGGGTGAAGAGCAGTATCTTCAGAGGCCATCCAA
GTTTTAGCATAACAAGGAGGGAAAGAGAATGCAGAGAAGAGGCTGGTGAT
AGACAAGTTTCATGTTCACAACTTGAATTGCAGAGGTCAAGAGTTTAAAG
AGTTTGGGATGGAAAGAAATCAAGAATTGGGCT

>Sequence 150

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GCTCTTGAAACGACAGCGATGTTTCCGTAACGGCATCTTAGCACGAAAAA
GCTCCACGGTCTCATTCCACAGCCTGGTAGCTCGGTACCT

>Sequence 151

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ATTGGCATTACCCAAATTCTGTCACACATTGAGCAATGAAATTCAGGAAT TGGACAATGACCTCTTGGCATATGAAAGAATTAAAAGAGGGCTAGGGCTT GGGCAAGGGATCTAATCGNGAGGGGATGTTGCTTTCCGAGGCTTCCCTTC CTTCTTCTTTTCTGGCTTTCAGGTAAATGAAGAAA

>Sequence 152

>Sequence 153

CATGGCTCCCGCGGTGGCGGCCGAGGTACACCTGCAACTGTGCGAATGGT CCTGTTGCCTCCTGCATTTTGGCCTCTGTTCTATAAAGGAAGAGTAAAGA TGGAGCTCCTCCTGCCTCCATCACGAAAGCACATATCATCTGTCCCTTTG GATTTTACTTCCAGGACGCGTGTCGTCCCCAGCGTGTGTTGCCTTATGGT GCCGGCAGAGCCTCAGCTATCTGCCTGGGAAGTCGGATGTCCTTGGAGAG AATTTGGAATGCAGATAATTTTTCTTATTTCTTGAGAGCTTACTTTAATC AGCATGACACTACCTAAACACTGAAGATGGCCTTATATTAGTAAGATTTG CACAAAATTAAGTATACCTATGCAAACTATTACTTTGGTTTTTAGGAGTT TGGTCAGATGAAGAAGTAATGGGATCACATATATATGTAAGAAGACAACC ATCATTATTTTTGTAAGTGTTTTATTAAAACCAACTGGTTAACTTGTGAA

>Sequence 154

TTTTGCGTTGAGCTCCACCGCGGTGGCGTCCGGCCCCCGCCTTTTCTGCG GCTTTCAGCGCGCGTTTCAGGTCGTCAATGAGGTCGTCGGCATCTTCGAG ACCGATGGACAGGCGGATCGTGCCCTGGCTGATGCCTGCGCCCAGCG CTTCGTCGCTCATGCGGAAATGCGTGGTGCTGGCCGGGTGGATCACCAGG CTGCGGCAATCGCCCACG

>Sequence 155

>Sequence 156

>Sequence 157

GTAGAGGGTCACCGGGGGCGGCCGAGAAATGTCGCCAACTGCCGTCTTCC CTCCTCGGCCGCTGCGACAAACACCCCACAAAATGGCGGCAGCGCCGTCG CCCTAGAATCCCCCGAGTCGCCTCTCCCCGCGTACCT

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>Sequence 158

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>Sequence 699

>Sequence 848

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ATCTAATTGTTTTCTCAATCTTTGTAAACCAGTTTTAAGAGTCACCAGAA
ATCTGTAGTTTAAGGCACCAGATACATTTCTTGGCTGAGCCTTGTAGGAC
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ATCTGAATGCATGGGACACTTGCTACGATGGCGGGAATTATTACCAGGAG
TTTAGGAGCCAGACATGGGTTCTGTATTTTTCATACATTGGTGATCAATT
CAAATCTCTTTCCTTTGCAGCCCAGGTTTGGTCAGTCTGGCCAGGAGTGC
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TCTCAATACCACCGAGTTAAACAACCTATTTAAATGCAAGACTATTGATT
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>Sequence 849

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AAATGATTTTTTGAGAGAGAGAGTCCCTAGGACCTAAACATTCGTTCTAC
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GTAGGAGGAGGTGACCAGATGTGATGGATTATGCCTGTAATTCCAGCATT
TTGGGAGGCTGAGGTAGAAAGATTACTTGAGCCCAGGAGTGTGAGACCAG
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GAGGT

>Sequence 850

>Sequence 851

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> Page 29 (of 261 pages in Table 2)

>Sequence 852

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CCCTTAGCGTGGTCGGGCCGAGGTACGCACATACATACACACTAACGCTC
AGCATAAACTTTCCATTACACTTAGACAATGACTTGTGGAGGAAAAACAA
GGATAAACAAGAGTCTCAAGAACTTAAGAAAAACATCAGAGTTGATTATT
TAGCACTTTCTCAGGATTCTAAGGCAATAAGCCTAATTCAAAACGTGAAA
TTGTTCTCTATTTCCCATTAGTCATTAAATGAGATAAATGACAAGCTATT
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GTTCTCTAACAGTTCTAAAAAACAGTTTGAT

>Sequence 854

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>Sequence 855

GGTACCTGGGACTACCCACCACCATGCCCGGCTCATTTTTGTATTTTTAG TAGAGACAGGGTTTCACCATGTTGGCCAGGCTAGTCTCAAACTCCTGACC TCAAGTGATCCACCTGCCTTGGCCTTCCAAAGTGCTGGGATTATAGGTAT GAGCCACCGCACCCAGCCTTCAATTTTTTTTTAATTCTGATAGAGCACCAA TCTACTACATGCTTAATATTATCCATAAACAGACATGTCTGAGCACAGAA GATCATGTTAATGAAAGATTATTGAAAGGT

>Sequence 856

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AGCTCTTATTTTCTTACTAAAAAACAATTTTAAGTTCTTTCAAGGCTATA
GTTACGCTTTACATAAGAGGCCCTATTACCCACTAATTCTTAAAATTTCT
ACCTACTTAAAATTTCTTTAGACATTTCCAAAGGTTAGTAAAGGAAGACA

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TAAGATATGCTTACTTAAATCCTTGCTGGTTCCATGCCTGGCCATACATG

>Sequence 857

>Sequence 858

>Sequence 859

ACTGGCTGGACTTGAGGTGGTTTAAGTTGGCAGCTACATCGAAGGACTTC
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CCTTTTCCCTCAAAACATGGATAATCTTCAAACCTCCCTGAACAGGTGGA
AATGCGTCTTTCCTCTAAGCCAAGTTCTCAGTCCACATTAGTCCATACTT
GGCTACAGAATTGACGTTTGTGGCCACAATCCTACTAGAAATGACCTTTG
GGTAATATCCTTATCTTGTTGATCTAGTTAGGGTCAAGTAAAACGAAATA

>Sequence 860

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ATATAGATGAACAATGAAGCATAAACAAAATTTTAATATCTTACAGGCTA
AAATATTTAGAAATGAAAGACAACAATAGCATATAAGTTAAGAAAGGGGG
TAAAAAGAATCAAGAGCATTCTAAGGTCCTTATATTACCTGGAAGGAGAG
TAAAGATAATGACTATCTTCAGGCTGATAAATTAACAATGTATGCTGCCA
TTTT

>Sequence 861

>Sequence 862

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>Sequence 863

>Sequence 864

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TTTTGTTGATAGCACTAGGAAGACTTCTAACGTTTAAATACTTTATTTGC CCTCAATTACTATTTAAAAGTCCTATAATTTTAAGTAATTNTACAGCTGA CAAAGATAAATATTTTTTTCTTTTAGTTTTTCTAATGTCTTGGAGGTAAA GTGGAAATGGCCTGTTTTGACACATAATTTCTAGAACTTGGAGTTAATTT GATCAGTTACATTTGGGTTTTTTTTTAGATTACAGTTCTTGGGGTAGATAA CACTTCTTGCTGCTTTAAGTACCCTCGGACGCGACCACGCATAAGGGCGA ATATCCACACACACATGGAGGACGGTACATA

>Sequence 865

>Sequence 866

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>Sequence 867 CCGCGGGCATGCAGCCAGGCTAGACCGGCTCAGCCCCACTTCAAGACAAA ATCTCAGCACCCATTACTCACCATACATATTTATGCAGTGAGCTGCATCA TGACCAGCTATCATCTTACCTCATAGTTTTTTTTCTCTGGTAGAGATAATT AACTTATTATGCTTGATCAGTTAACTCTTGCTTAGAAATTTAAAAAATAT TTTTAAGTGACAAATTCTTTGTAGAAATTTTTTGAAAATAGAAATATTTGA AGTAGAAAGTTAAAATCACCCACAATTCTGCTTTTGTTAACATTTGAATA TGTTGTCTTCCATGATATAAACAAAATTTGTCTGGGTATTGCATATGTC GTCCTTCCTTCATATTGCATTTTGAGCATTTAACCAGAACACTAAA TATTCTCCCTAGAACATATGGATTTTGAATAATTTAACTAATTATAAAAA TAACTTCCCTAATGGTTCTTTGGGCTCTTTAAAGGTTTGCTGGTATATGT TCAGGGTATGAACACTTAAGGCTCTTGACCACATACTGCCATACTGCCAT ACTGGCATACTGCTTTTAAAAAATAATTAAGCTGAGTGCGATGGCTCACG CCTGTAATCCCAGCACTCTGGGAGGCCAAGTCAGGTGGGTCATTTGAGGC CCGGAGTTTGAGAACAGCCTGGTGGACCTGGGTGAAACCTTTTCGTTACT AGAATAACAAAAGGTTAGCCAGGTGTAGCAGCATGTACCTTGGGCGGGGA **CCACTCTAAGGGG** 

>Sequence 868

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# Table 2

>Sequence 869

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>Sequence 871

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>Sequence 872

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## Table 2

>Sequence 873

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>Sequence 874

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AATAAGAAAAAATGGCATTGACTTTGTATAGAACTTAATAATCAGATTTT
TAAAGAGGTTAGTCTATTCTCTTATTTGAGAGATATGGAAACTATCTAGG
CCTAAAGACTGTAAATCTGCCTGGAATCAGATAGTTGGCAGCAAAATCAG
AAATAGAAAGCAGTTACTCAACAACCAACAGTTTAATTTAAGAAACATTT
GACAAGCATCTCCTGTGGATAAGACCCTATGCAAGATGTCATGAATATAA
ATATGCACAGTAGT

>Sequence 875

>Sequence 876

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AAGGAAAATAAAAGCCGCAAAAATGTCTAATACTGCCATTGGATTGGTGC AAGGATTAAGGGCTTTCAGGGGAGGAAGGCCTTTACCTGGAAAAGTTTG GCCTGGAAGGCTGTGACAATTACTTGTTCTCCCTTCT

>Sequence 877

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TACTATGTTTCCCAGGCTGGTCTCGAACTCCTGAGCTCAAGTGATCCTCT
CACCTTAACCTCCTGAGTAGCTGGGACTACAGGTGCAGACCACTGTGCCC
TTACTTCTATTCTTACTTGACAAAGGAGGAAAAAAAAAGGAAGTTTAG
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AAGCTGGGGTTTGAACTTCAGCAATGTGCTTAAATCTCAGTAACTGAAAA
TACACTATGGAGGACCTTTAGGTTTTCTTAAATTCAGAAGGTCTTTTTCC
ATGT

>Sequence 878

>Sequence 880

>Sequence 881

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>Sequence 882

>Sequence 883

>Sequence 884

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GCTATACTAAGATATAGAGTCCTGCCACAAAATACACACAAAATAACATGA
ATACAAAGTGTCCTAAAAGTCATGCCAAATAAAACAGAGCATATAACTGG
GCAGAGGGATGGAGAGTCACATGCTGGAGGAGGTGAGCGTTGACATGGTC
TTATGGGATATGAACTTGAGATGTTGAAGTAGAACTGAGACATTTCTGGA
AAACTAGATGTATGAACAGAAGCAGGAGGAATAGGAGAAGGTTTGGAAAA
CAGCAAGCAGCTCAGTTTCTTGGGTGGTCCAGGAGAAGAAGCTCAAACAA
CAGTCAGTGATAACACTAAAAAAATTTTAAAAGTCTGGAATCA
CAGCATAAAGAACCCGTATGCAGGATTTTTATCTCGCAGCCCTGTCTCCC
TCAGGAGACAGAGATCCAGAATCACTTTCCAGAATGGTTTAGGGTCACCT
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>Sequence 885

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TAACATTAAAATGAAACCAGTTTTGCAGCTAGCATCTATTGACAAATATA
ATTATTTATTTCAAACTGTATATTCCAAATTTAAACATATTCAATGCTTA
TTGAACATTCTAACATAATAGCTTATGATAAAGGAAAAATATAACATCTGG
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CAAAAACCTGTCCAATTTGGGATTGGTAGAAATAAACCGGATGACCATTA
CCTTCTTTTTATCCCCAAATTGGATTTTATGCCTACCTAATGGCTTTCTT
GGATATGATGGTTGGCAATAGCCTGCTTCTAATCTATTTTGGATAGAAAA
GGGAACTTTAATATTCAGATTAGGGGGCTTGATTTTGACTTCCTTTAACA
CCGAATGCGAT

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>Sequence 886

>Sequence 887

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>Sequence 888

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>Sequence 889

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> Page 37 (of 261 pages in Table 2)

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## Table 2

>Sequence 890

>Sequence 891

>Sequence 892

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>Sequence 893

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>Sequence 894

GGTACAGGTCACACAGCACATCAGTGGCTACATGTGAGCTCAGACCTGGG
TCTGCTGCTGTCTTCTCCCAATATCCATGACCTTGACTGATGCAGGTG
TCCAGGGATACGTCCATCCCCGTCCTGCTGGAGCCCAGAGCACGGAAGCC
TGGCCCTCCGAGGAGACAGAAGGGAGTGTCGGACACCATGACGAGAGCTT
GGCAGAATAAATAACTTCTTTAAACAATTTTACGGCATGAAGAAATCTGG
ACCAGTTTATTAAATGGGATTTCTGCCACAAACCTTGGAAGAATCACATC
ATCT

>Sequence 895

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TCTGCTGCTGTCTTCCCCAATATCCATGACCTTGACTGATGCAGGTG
TCCAGGGATACGTCCATCCCCGTCCTGCTGGAGCCCAGAGCACGGAAGCC
TGGCCCTCCGAGGAGACAGAAGGGAGTGTCGGACACCATGACGAGAGCTT
GGCAGAATAAATAACTTCTTTAAACAATTTTACGGCATGAAGAAATCTGG
ACCAGTTTATTAAAATGGGATTTCTGCCACAAACCTTGGAAGAATCACATC

>Sequence 896

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>Sequence 897

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>Sequence 898

>Sequence 899

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GTAAGAAATCCGCCACACAAGAAAGCACTGACATTTGGAGCCTCATCAGG
TTCAGAGTTGAAAGTGAAATAAAGGATAATAATCTTTGTCTTATTTTCTT
TGTTTTAATGTTTCCCAACTTACGTTAGGACAATGTCAACAAAGACAGAT
GTCCCTAATAGTAATTGCAGGACATGTGTTTTCTCATTCCTATCA
>Sequence 900

CCCTTTGAGCGGCCGCCCGGGCAGGTACATTGGAGGGGGCCATATCCAGG

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ACCTGTGATGTGTATAGGCAGACCAGACTGGTAGGGAAGAAAAGCAGAGA TATCAAGTGGGGACATGTGTTTGCCCTGGGGCTCTATTGGCCTGGAATT TTGTGGTAGGAGGAAGGCACAAAAAGTAGACTGGGATTACAGGCGTGTGC CACCGCGCCCGGCCTAAAGTGTGTTTTATAATAAAACCTCAATCTGAAAC ATTTTAATAAAAACCTTTAGATGACTAGATITATGTTTATTTTGGATTTAT GTTTATATGAATAAAAAAAGAAAAAAGACGAGG

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>Sequence 903

>Sequence 904

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>Sequence 905

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>Sequence 906

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>Sequence 907

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TCGGGATAATGGAAAGCTAATAAGGTTTATGCTAGAGGCTCTTACTGCTG GGACTCTCTTCTTTTTTGGTTTTTAGGAAAAAAGCTAGAAAATCCAAC TTCAGCTAGAGTAACAGTAGTAACTGACTTGAAAGTATGTCAAAACANAA ACTGTTAAG

>Sequence 908

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GTTGCAATTTCTTCCATTACCTGGAATAGCTGCTTTGGACGGCAAACCAA
GCAATGCCCTTTCACAGCTGTGGGATGAATGGGGAAAGAAGTCTTGGTAA
GGAAGCAATTCAGAGAACATGGAAGCATCTCATGGCAGCAGTCACAATTT
TGTGTTGCGTAATATTTCAGGAACTTGCAACCCTGATAACTTGTGCCTGC
CTGTCTGTAGGCCTTTAATGATGTTTTATTGAATTTTGGTT

>Sequence 909

>Sequence 910

ACTCAATGGGGTAGGGTGTCTTGGGATCTGACTGTTTCTTAGACCTTCAA
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CTATTATCTCCTCTCTGTTTTCCCTATGGTGTTTTTGTGTCTTTTTCTT
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GGTACAACCTAGCCAGCTGCACAGCAGCTCTCCAAGAAAAAGGTGTATAT
TAGACAGATTCAATTATTCATCTTGTGATTATGAGTAGTAACCAAATTGT
CTATGTAATTTTCTTATGGTGAACTACCCAAAGCCAAGGCCTCACCTTAGG
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TGTGAGAAACCTCATGAGCACTGAGTGTTCTAGTTCCAGATGAAAACCGG
TTTCAGGTATGAAGCAAGAGGGAGTGCTAATTGGTAGAAGTAATTACATC
TTT

>Sequence 912

>Sequence 913

>Sequence 914

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## Table 2

CAGATTTTCTGAGGGGAGGCTCAAAAGGCCCGAGAGGCTCTCTACAAGGA GAAAGCAAGCCAGAGAATCTGA

>Sequence 915

>Sequence 916

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CCTTAAGCGACCCAGGGTAGCTTGTGATGGTTCAGATTATGATTTGTTCT
AGAGCTTTTCCAGAGGCAGATGTTGAGGAGTTTATCCTATTTGTCCCCTT
CCCTTTAAACAAACAAAAGTGCCGGCTGGACGCAGTGGCTCATGCTGGTA
ATCCCAGCATTCTGAGAGGCTGAGGCAGGCGGATCACCTGAGGTCAGGG

>Sequence 917

>Sequence 918

>Sequence 920

>Sequence 922

GGTACATACAGTATGCACTCCCTTCTCTGTGTTTTTTGTCTGAGTTGATG

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#### <sup>264</sup> Table 2

ATTTGGAGCTCAAAGAGCTAGCGGAGGGAAAAGCTGAAGCCATTCAAACA CATAATGAGAATTGGAGATGTAAAAGAAGGCTGAGTTCTAGGAGTTGCAA CAACTTAGGAGATAACAGAACCAATTCGGAATGAGCAGGAATTGTAGGAA TGCAGGCGAGGACTAGAAGAATCAGCTACATGCTGTTTACTGGCAAAGCA GGAGAAATGTGACTGAGGACAGTATGCCACTGAAAACTGATGAAAGAGGA GGGAGACAGGAGGA

>Sequence 923

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>Sequence 924

>Sequence 925

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CTGGAAGTGTCCCTGACGGAGAAGTTTTACAAAATGAACTTCGAACTGAA
GTATCCCGATTGAAACGGAGATCTAAAGATCTGAATTGCCTTTATCCCAG
AAAAAGACTTGTGAAATCTGAAAGTTCAGAGTCTCTTCTTCTCAGACAA
CTGGTAATAGTAATCACTATCATCATCATGTGACATCCAGAAAGCCACAA
ACAGAGCGGTCCTTACCAGTGACTTGTCCATTGGTTCCAATTCCTAGCT

GGTACCCAAACACAAGATTGCTAATAGACTGCTAATAATAGAACTTAATA
AATGAATAATTTATTTCATTTATTGTTGCTTGGAATACAGAAAGTGCTT
AGTAAATATTGAATGAATCAACAAAGTACCTCCCAATATAGAGAAATCAC
TTCTGAAAAGGATAAAACCAAGTTGATCCTATTCAATCGAAGGCATCTTT
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TACTTTGTTCCAAGTCACTGCTTATAATGTGCTAATGGTACCT

>Sequence 927

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ATCTCAACAACCTCAGCCAGAGTGTCAATTTCTGTGAGAGAACAAAGATT
TGGGGCACTTTCAAAATTAATGAAAGGTTTACAAATGACCTTTTGAATTC
ATCTTCTGCTATATACTCCAAATATGCAAATGGAATTGAAATTCAACTTA
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TTTCGAAT

>Sequence 928

>Sequence 929

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AAGAATAAGAGGACATTTTTAAAGGAATTAAAGGAACATTAATTCCTTCA TAAATGTATAGTGCTTAAGCTCTGCTTTAAAAGGTCTTTCCATGTGCTCT TGGGTAACCACTTAGGGCTGAATTCATAGTATAAATATCAATAAATGTTG CAATCACAAT

>Sequence 930

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>Sequence 931

>Sequence 932

>Sequence 933

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>Sequence 934

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AGCTGTTATTTTTAATAGCTATACTAAAACATAAAAATGTTTAGGCCAGG
CGTG

>Sequence 935

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ATGTTGTTGTTACTGTTATGGAATTTATCACAAATATGTAATTATATGTT
TCGTAGTGATTATTCATCACCCCTACTGGACTCTAAGGTCTGTGAGGATA
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> Page 44 (of 261 pages in Table 2)

TG

>Sequence 937

>Sequence 938

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>Sequence 939

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GGATATGCCAGTGTGTCTCAGTAATTTCCAGTGGCTGTAAAACTTTGAGA
AATTTTGTAGCTTTTAGAAACCACATACCTGTATTGCCTGATTGCTTATT
AAGTGATCTCTTAGAGGTTTCCAAAGTTATGAGTTTGAGTTTACAAGTGC
AGTTTTTTTCCATGAAAATTTCAGTGGTGACAAATTATAGAATTTATCAT
TCAATTCAGTCTTAACTAGAAATAATTGCATATAAAAAACAGGTTCTTG
ACTGTTCTTTTT

>Sequence 940

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>Sequence 941

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TAAAAAT

>Sequence 942

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>Sequence 944

**GGTACAAAATCAACTTTCCTTTTTACTATCTGGAAATAGGAAAATGTTC** 

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#### <sup>267</sup> Table 2

CATTCACTATGGTGACAAAACTGTAAAATAGGAATATATTTCTGAGGAAA GTATAGGTATTTACAAATAGATAAACTATATTCTTAGATGAGAATACTTA ATACCCACTITTACAAAATTAAAAATGAATTACAGCTTTTTAAAAATAGAT TAAGCTGGGTGTGATGACATGGCACCTATAGTCACAGCTACTCAGAAGGC TGAGGCAGGAGAAGCACCTGAGCCCAGGAGTTTGAGGCTCTAGTGAGCTA

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>Sequence 947

>Sequence 948

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GCATTGTATGTGTTTACTTTTTAAAGAAGCATTTCCTGGGAGGTTTCTTT
TTCTGGTTATGAAAATAATATATGCTTATGGGGAAAAATTGGAAAATAGA
AACAAGTATCTAGAAGAAAAATCACTCATAATTCCAGCACCCTGTTAATA
CTTTGTCTTTTCTTACAGTT

>Sequence 949

>Sequence 950

ACTTGGTAGGTTGATCTCTTTCATTCTCATGGTTTAATTACCATCTATTC
ACTGATTACTCCCAAAACTGTATCTATAGTCCAAGACTGTTTCTAAAAGG
TCTGCACCCACATATGCAAATAAATACCAGATATCTCTCTTGGTTATATT
GCACATATNTCAAACTCAATANGTTCAAAACTGAATTCATCTCCCCCCT
AAATGTATTTTTTCTTCCCCCTCTTTTGATAAAAGGGATTACCAAAAACC
CCACCCGCCAGGTTAAAAACCTGGTTTGGAAAAATTTATTGTTTTTTTAC
CCTTTTTTAAAAAGG

>Sequence 951

GGTACTCTTAGGAAAGAGTAATGGGGTTGAGGATGGTTAATTTAGCCCAT CCTAACTTCTGTGAGATTTTTTTCAGAATATTTTGGATGGTTCTCTCACT

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TTTGTTATTAAGCATTTGGGAAGAAGATTCTGCAGCCTACTCAGGTGAGC CAATCTCATGGCATTGAACAGAGAAGATATGTTTTCACGTCTCTAACCAG TGTTTTTCATAGTGTAAGTCAGGCCTTTCTCCTTTGATCTAAGTGGAACC AAGAGGTTAGATACTCCCTTTTCTTTAGTTATAAATGGGCTTCATGTAA CTA

>Sequence 952

GGTACACTCTGTAGGTCTACAGGTAAAAAGCTATTACGTTGCAAACATTA
TAACGTAATGTAAGGTCTGGATTACATGCCTAAAAATCCAATGATTCTTG
GAACCATCAAATCTGTTAAGACTGAAAAGAATACCAATGTTTAAATATAT
CTATAAAATGCAGGTCAAGGGGCTAAGAAAATTGCAACACTAGAAAACCA
ACAAACTTAGGTTGTTCTAACATACATACACAAAATACAGGAGGGACGTTT
ATGGGTCACATCTGCGAAACATTTTTTCCCAAAAAAGCTGAATTTTT

>Sequence 953

>Sequence 954

>Sequence 955

GGTACCTTTAAGCCAGATTCATGGTATGAAGGCAGCAGCATAGCACCTCC
ATTGACCCACATGGGGGCCTGCCTTGGGCTTCATCAGCCCTTTGGAGTCT
CAGATCCCTCACCTGTTAAAGGAGAGTAATACTACCCACTTACCTTTTTG
GGTTGTTGTGAAACACACATAAGACAGTATTAGGAGAAGTAAGGTCTGAG
GGCTGGGCTTTGGACCCAGCGGCCCCTAGGTAGAGGCCTGTTGAATTGGA
TGACAGTGAACTTTGCAGCATTTCCTAACCTCAGAAGTTCAAGAG
>Sequence 956

CCCTTAGCGGCCGCCCGGGCAGGTACTTCAGGAGATACATTCTGCTAGTT
TGGGGTGGTGTTCTATAAATGTCAATTTAATCCAGTCGGCTTATGATT
TTCAGTTCTATATTCTTACTGATTAATGTGTATATACTAGTTCTGTTACT
AAGGAGGGATGTTAAATTAATCCCTAGCTGTAATTGTGCATTAGTTTGTC
TCTTTTCAGCTGTTCTAGCTCCATAAATTTTTGGAGCTGTTAGGTGCATA
TACGTTTAGGATTATTTTTGTCTTCTTCTTGGTGAACTAGACCTTTTATCATTA
GGAAACTGTCCATATAACCACT

>Sequence 958

CCCTTTGAGCGGCCGCCCGGGCAGGTACTCCATAATATAATCTTTTAAAT
GGGCAACTTCTAAATATTGATACAACCATTAATAATAATGCTTATAGGGT
AAAAGAAAATTTTTGAAGCACTGAATTCAGTAACCTGGGTCATGGTCCAA
TTTTGCTCACTACTTCATATCTTTTATGTAGATTATTCCTATAAACATGT
TCCCTAAATTCCACATCAGTTTGTAAAGTCAATGGATTAAATTATTCAAA
TGTAGCTATTTAACGGTCAGTAACAATGCCTAGAAACCTATT

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>Sequence 959

>Sequence 960

>Sequence 961

GGTACTTGAGAATATGATTGTAAATTTGATCAGCAGCTACAACATTTCAA TGATGCATATTTTTTTTCAGATGCATTCCTTTGATTGAATTTAAAGTCA AGCTTGTGCTTCTGGATGGTTGCTTTGTCAGTGAACACTTGGATTTGGAA AATACAGCACCTGGGTTGGTTTTGAGAGAAAATGGTTTCAACTTTATAAT TACAGTTTTAACCACCACAACAACAAAATTAGGATGGTAGTGAAATGGAA CTAAATCAAATGCAAGGTTTTAGTTTAATAGAACAATGTCATCCTTTAAT AATCTTTAAAGAAGAACAACTTAATAACCAATAACAAAATTGAAATAGGT CAACTT

>Sequence 963

GGTACTTGAGAATATGATTGTAAATTTGATCAGCAGCTACAACATTTCAA
TGATGCATATTTTTTTTTCAGATGCATTCCTTTGATTGAATTTAAAGTCA
AGCTTGTGCTTCTGGATGGTTGCTTTGTCAGTGAACACTTGGATTTGGAA
AATACAGCACCTGGGTTGGTTTTGAGAGAAAATTGGTTTCAACTTTATAAT
TACAGTTTTAACCACCACAACAACAAAATTAGGATGGTAGTGAAATGGAA
CTAAATCAAATGCAAGGTTTTAGTTTAATAGAACAATGTCATCCTTTAAT
AATCTTTAAAGAAGAACAACTAAATAACCAATAACAAAATTGAAATAG
>Sequence 964

ACACTGCATAAAGCCAGAGTTAAAACTTCACTGCCAGCCTCTGAACAGAA GGCTGTTCTATCCACACTATCACAAGACCTGGTGGAGTTGAGGCAACTGC TGAATTACCATACAGGGAAGAATGAATTCAAGAAAATTCCCATGCAAGAT AGGCTCTTAAAAAATAAATTTACACAAGAAAATCAGCACTGTAAAGGTAA TTGATAAGCCCAATAGAAGGGAAACCTATACAAAGAAATAGAAATAACTA AGCAATCTGAAATGGACTTTAAATAATGATGT

>Sequence 965

ACACTGCATAAAGCCAGAGTTAAAACTTCACTGCCAGCCTCTGAACAGAA
GGCTGTTCTATCCACACTATCACAAACCTGGTGGAGTTGAGGCAACTGCT
GAATTACCATACAGGGAAGAATGAATTCAAGAAAATTCCCATGCAAGATA
GGCTCTTAAAAAATAAATTTACACAAGAAAATCAGCACTGTAAAGGTAAT
TGATAAGCCCAATAGAAGGGAAACCTATACAAAGAAATAGAAATAACTAA
GCAATCTGAAATGGACTTTAAATAATGATGTTTACAATTCTCTAAGAGGA
AAAGGAGCATTAGCATCAGTGAAACAAAAGTAGGGCTATAGAAAAAAACAA

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>Sequence 967

>Sequence 968

>Sequence 969

>Sequence 970

>Sequence 971

GGTACCAAGATTATGATAGCCTCTTAAAACAAATTGGAGGTTATAACCTT TTTCTATTCTCTGCAACAGTGGATATAGGATTGGAGTTATTTTTTTCTTA AGTTTTTGGTAGAAACTAGCCAGTGAAGTCATGTGGGTTTGGATTTTCTT TGTAGGAAGGTTCCTAATTACTAATTAGCTTTTCAAAATAGTTATGAGAA

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TATTCAGGTTTTCTATTTCTTCCTGTGTCAATTTTGTTGTCTTTTTCTAT
AAATTTGTTCATCTATAATTTTAATATTTTTGGTATAATTTTTTCAAAA
TAATCTTGTATTTATTTACAAGACAGGATCTTAATGTTTAATGACAGGAT
CTAT

>Sequence 972

>Sequence 973

>Sequence 974

>Sequence 975

>Sequence 976

>Sequence 977

GGTACTITAAAAAGTAAACAAATITAACTGAAGCATGGCTATTAGTTAGT GATTCTTTGTAGATTTTCTGGAAAGTCTTGTTTGTTTGTATTAAACATTA ACTCTGCTGTATGCTGTAAATACACTGCTAAGATCAATATTGAAAAACGA ACAATAATACCAATTCATATGGACCTTCAAATTAGTCTTATAAAATTTTA TGATATGGTATTATCCAGCCAACTGACTTTGAGACTGACAAAATATTCTA ACTITAACCAGGTGATTCTTGCATTCTTTGGTTTAAAACCTCAAGTTTAA AAATATCTTTATATTTACATTTAATTGTCATTAATCA

>Sequence 978

ACGACTTCACAACACCAACCACAGGTCTCAAGGTCAAAAAATGAGCTAGG AGTAAAGTATCTGCTCCAGAATCTACCCCCATCCCAGAAAGAGCAACCCA

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## <sup>272</sup> **Table 2**

>Sequence 979

ACCTGGCAGCAGAGTAGGCACTAATATGTGTTGAATGAGTAGGTGAAATA
AACAAAAACCTAATGGCGATGGAATTTTATGGAAATAAGTAAACTTCATT
ATTGCTGAAAATACCGCAGATAAATAGAGGGAGGCAGTGTAATAGAGTGG
AAAGAGCAGTAGACCAGGAGTCAGACAGTCGAGGATCTCATTCTAAATTT
GAAGGTGAATAGCCATGTGGCTTTAGACAGGACTCTGAACCACCTTGTTT
TCTTATCTGTAAAAGGGGGAAGTCATAATAGCTACTCCTGCCTAACTCAT
AGGTTGTTGAGAAAATGAAGTGATTCA

>Sequence 980

>Sequence 982

GGTACTTAGATCAGATGGATTGAAACATGACAGCCCCATTTCATCTGGCC
GGTTAAGGTCCTCATGGAATGAAAAACACTTTCGGGCACTCTCCTATGAG
AGAGAGAATGGGTTTCTTTAATTGCCAGATTGTCTGAACACAGCCTCAGC
TACTTCTAGGAATAAGACGAAGCAGTGAGGAAGTTGCCAGTTGAGTGATT
CTTGGGGAAAAAAATTAGCATTCAGTGCCAGCTCTCTAAAGTGTGGATTC
TGGATTCTGGTAGAAGCCAGTAAAGAAACGTTTTCTCTGGAGTGGAAGCT
AGTAAGATTTATTC

>Sequence 983

>Sequence 984

>Sequence 985

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## <sup>273</sup> **Table 2**

ATGTTGGCCAGGCTGGTCTCGAACTCCTGACCTCAGGTGATCCACCTGCC
TCAGCCTCCCAAAGTGTTGGGATTACAGGAGTGAGCCACCGCACCCAGCC
TGTGTGTTTTTTTACTTAAAAATTTTAAATTTAAATTTAAATGTTTA
ATTGACAAATAATTTTATATATGGGGTATAATGTGATGTTTTGATGTATA
CATTGTTGTATACGTTGTAATTGTATACATTGTGTTGTATACATGGATGT
ATACATTGAAATTATTGTATCCAGAAAATTAACATATCCATCACCTCAC

>Sequence 987

>Sequence 988

>Sequence 989

>Sequence 990

>Sequence 991

CCCTTAGCGTGGTCGCGGCCGCGGTACCCTAAAACTTAAAGTATAATAAT AATAAAATTAAAAAAACCAAAAACAAAGATTAACAGAAAACAAAACAACA AAAAAACTCCCAGCATATACATTGAGTCATTTGCAGGTTTTGGGAGGGGGG GAAATGCTTTTTTGTATTAGGAGAAAGGGAAGTTTTCATTTTAAATGTCT

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<sup>274</sup> Table 2

ATATTACTTAAAGTTTGCAATAAATATTTATTACTTTCAACAGTGAAAAA AATTACAAGAGAATATGAAATAGCACAGTAATACAGACTATAGTAATG CTAGAGAACATAATGAAAAAACAAAGAAAATATGGGGGGGAAAATAGCTTA AATCCTAATCCAAA

>Sequence 992

>Sequence 993

CCCTTTGAGCGGCCGCCCGGGCAGGTACCCCATCAGAGTGTTTCTCTTGG CTTTCCTGTATGTAAACCTTACTAATACTTTTCAGTCACCAACCTTCTGT GTCATTTCCTTTTAAGCAAAAAGGAGAAGTAAAGTGGAATTTGGGTTTCA AGAGCCATGCTTTTGGCTTTTTCACAAAGAGAGTTGCTCTTAATAAGGCG CCTGGGTGTAGTTTTCCAAACACCTTTATTTTCTACTTGACTGTCCTGGA TATGTTGGCCTTTGAAAGTTGGTTTAATTTTAGTAGAGGAAGAGGTGTTG GACTTTGGAGTAGTGTAAATGTTTACCCTTTTGGCCCGTTGGAACCACCT GCCTTATGGGGCCGAATATTTCCCAGACCACAACCTGGGTCGGGACTCGT TTAACTTAGTTGTGTATTCCCTGTGGCATTGGGGTTACCCCAAAGCTTTT GGTCCGT

>Sequence 994

>Sequence 995

GGTACCATCATCTGTTTCCCTCTGGTTATAAATCTTTAATGAAAACGGAT TTAAAAAGTCACATTATGATGCTCGAAGCTCTGACCTCTCATCACAATGA GAAGCAAAAGACATGCCATAAAGATGATATTTCCCACAGGAACGATATTA GAATTATGTGATGCAATCTCATCCAAGGTCATGGTATCAAACCAGACACA GCTAANAATGTATCATAATAGCAAGGATACAGTAGCAAGGATGGGCCTCA ATAAACATTTAAAGTGGAAAAATTCTTCTCTAACTCATATCAAGTACCTG CCCGGGCGCCC

>Sequence 996

ACCAAAATAGATAAGGATCCTGTTTTTTTGAAATGAACCCCAGTTGCGCCT TAGGCATTGTGAGTTGGCTCATTTCAAGCCAGTTGTAATATGGTTTTTTA TTCTCTAAATTTCGGGACCTGATGCTAAGGAATGTGAATATACAGTTAGG TTCCTGCGAACCCTGTGTTGGTTCAAAAAGGCTGGTGGAGGAAATTTAT GACACTAAATGCTTATATTAGAAAAGAGGAAAATTGGCCGAGCACGGTGG CTCATGCCTGTAATCCCAGCATTTTGGGAGGCCGAGCCAGGTGGATC

Page 53 (of 261 pages in Table 2)

TCTAGGGTGATTTCCCTGAATGCTGCAAATATTCAACATCTATTACATGG GTTTAACAATTTTTCGAGCTTCTTTTAACTCGAAAAT

>Sequence 998

>Sequence 999

>Sequence 1000

>Sequence 1001

>Sequence 1002

>Sequence 1003

CCCTTAGCGTGGTCTCGGCCGAGGTACATCTGTTTCTGAAAGCATTTTTC
ACTGAACCAATTTTCTATACCTTTTTCTTGTATTCTTTTCCTTAGCTTTT
GTTTATATGGTTGCTATATTTTTCAAGCCTCATACCAGTCATATAAAACC
ATGATAAAACTTCATCAAAGCATACTTGGGCAAATTTCAATTATCAAGTA
AAATTGTAAAGAAAAATTTTTTACTAGTTTGGAAATAGATCTACATGTTT
GATTTTCTTTCCTTCCTCCCTCCTTTGTTTCTTGTCTTTCTCTCCCCTTT
CCTAAAAAGTTAATGGCTATCATTATCTTCACCAAATTAGTGTTTGTATA
CCCATAAAAATGTCAC

>Sequence 1004

GGTACTCCTGAACTTAAAAGTTGAACAACAAAAAAAAGAAGAAGGAAAATGCGT

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TAATACCTTATTGTAATTATTATTTTTTTGGAAGACTATTTTTTATATTCA GAAGAAGTGTCAGAGTCAGCAGAAAGGGATTATTTCTCCATTTACCTACA ACAATGGTTTTAAATGACTGGATAGATAGAAATCTCTTTCAACTTAACTG CTTAGCACATTGCATTTTTCTCTGTTTCAAGTTAGTTTTCCAAAGGATTA CTGACTTTTTACCTAATTTGCTAAGGGATGTCAGGCCTTAATGACATATT TCTCCTCAAATAAAGATACAACATGCTTTTACTGTGTAGGAG

GGTACTTCGGTATTACAGCGCCACCCACTGGCTAGAAGTCCTCATAGCAC
ATATGAGATGTAGCCATAAAATAGATGAATTCTTGAAATAAGGAATATAA
CACTGACTATTCTGATTCAGTAGAACATAAAAAAATGTCTAACAAAACAGG
AACCTAGACACATTTATATTTTTCTACAAGTAAACAGAATATCTATTA
GATATGTTCACAAGGGTTTTATCAATTTTGAAATCCAAGTGGATAATCCC
CAAATGCTGTAAGGACTTAGATTTTATAGCCAAAACAATTAACACATAAA
ATGCTATTACATATTTGG

>Sequence 1006

ACATAGTTCTGCTTGCATTGGTCCCATTACAATCCTGTCTAAATCCTGAA
GTAAAAATGAATACCATAGTGAAGAAATTACTTGTGCATGTGAAAGAGGC
TGGTCCAACTCCTTAATTGCAACAGGGATTTGATTCTTCTACTAGTAGTT
AGGAAAGGTTGCATTAATATTCAGTAGTTAAAATGTGCGATTCTAAATTT
TTTGTAATTTCCCATGAGAGAATAAATTTTTTCAAAAATATTCCCAGTAG
GTGAATGGCTTTAATACATGGTATCTGTGAAGATGGCAAATAAAATGACT
>Sequence 1007

>Sequence 1008

>Sequence 1009

CCCTTAGCGTGGTCGCTTTCGAGGTACTCTTTTCAGATGAAAGTGTTCGG
TCACCTGGAACCTGTGAGTATGTGGTTTTTGATCTGTGACTAAACTGTCA
CCCATTTCCCAGTTTCTCTGCTCCGTCAAATATCAACATTTTACCAGGTT
TCTCTGTTGTTGCCAAACCTGTCATTTTTATTTGGTGTGGCTTCTTGGGA
AACTTCCATGGCCCATTTGATGGGAATCAAACAGTGAAAACAAGGACAGA
TGCAACAGAGGTGGCATCAGGAACAAATGGGTCATAAGAACTTACCTTGG
CAGCAGCCCCAGAATGGTCAGGAGGAAAGGCACTCTAAGGTATCAGAAGG
TAGAAAGGAGAGGTTGGATGATAGAATGGGGAATGGATTCCTCCTCGCGT

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TCACAGAAATGAATTAATGGGAGACACAAGGGTACCACTTAATATTCCTG CTCTCCCTAGCATGGGTCAGGGTCACTGCCCGGCGGCCGCTTTAAAGGGC

>Sequence 1011

CCCTTTTCGTGGTCGCTGCCGAGGTACTGAGACACTGGATCCTAAGAAAA
TCAGAGTTATAGCTAGTGGCAGTTATCAAGGGAATGCAGAGGTTTCTGTA
TTCTGAGCATGTTCCTGTAATAGGATAGATAGGCGATGTGGCAGCAACAA
CTCCCAATTCGTAATGTCTTAAAACAAAAACAAGTTTTATTTCCCATTTA
TGCCATGTTTCCAGCACAGTTTCTCAGAGGGCTGTGCTCCATGCATTTAC
TCAAGGTCTGGGAATGATCATGGCTACACTATCTTGCAGCCACCATATTT
GGAACCTGTTGCCACTCTGATGGCAGCAGAAAACAAAAGAAACCAAAGA
TCATGTATGAGCTATTCACTGCTCCAGCCCAATAGTGGTTCACTTTTTAC
TGACCAGAACTAGTCTTCCAGCTCCACCAAAACTNCACGGAAGTTCAGGA
GCCCCAGAGGAGAGAAAAACAACTTGGGCCCGCGTACCTTGCCCGGCGG
GCGCTCGAAAGGGC

>Sequence 1012

CCCTTTCGAGCGCCGTCCTGGCAGGTACGGGCTTTTTTGTTCTTGTGCA GTAACAGTGAGGGCATGATTAGCCATCTTTGCCAGCTGATGTCTTGTGGA CACCTGCCTTGTTACCACTCTAACAGGCCCGTGTCAGCAGCTCCGCTTCC TCCTGACAAGCTGCGAGCACAGGGGACAGCACAATCTGAAACTCTTACAG ATACCAACAGCAACAAAAATGAAAGCAGTTATGGTGGGCAAGCATTAATC TAAAATTTTTTTTAAAGGA

>Sequence 1013

ACGCGGGGGGTCTCACCATGTTGGCCAGGCCGGTCTCAAATTCCTGACCT CAAGTGATCCTCCCCGTCAGCCTCCCCAAAGTGCCAGGATTATAAGCAG TCACCACAATTTCACCATGCATAAATCACAACGGTTAACAATTTAGCATC TTTGCCTTCTTTTCCTGTGCACTTACGTTTTTATGTAGCCAAGATCACAC GTTGCATTTTGCTGCTTTCCTTAACAGCGTCTAAGTCATCAGCACTCTAT TGTGATGATTTATCTTAAAAATATTCCAAGCGATCATTTTTAGTAACTGT GTAATATTATCATAAAGTTAAAACATAATTTGTCATTCAATTGTTGAA ATTTTTAGGTTACGTATATTTTCTCTTATAAATATGTAAATATGTTTATA AAAAGTTATATACAGTTTTTTATAAATCTTTGTGCATACTTTATACTGTT TCCTTAGCATAGAGACTGTGGAATAGGATTTCTTGAAAAAAGGTAAAAGT GTGAGTATGCATATATACTGGTACATATATGTTATTATTATAAAGGTAAT AATCTTTTTTTTTGGAGATAGAATCTAACTGCACCTCAACCTGTGTAAA AGTGAGACCCTGTCTCAACCAACCAGAAAAAAAGAAACTTCAATTAAAAT TAACCTTGGGGTTAATAAATATTTGTGAAATGTTTGGTGATCAGTATATA **CCTATAGCC** 

>Sequence 1014

>Sequence 1015

ACGCGGGAGAACCAGTGACAACTGTCAAATTATTGTAGTTAGCCAGTGAA TTTCATTTTTGAATTTTTTCTTTCCTTTGAGACAGGGTCTTGCTGTTGCT CAGGATGGTCTCGAACTCCTGAGCTCAAGCAATTTGCCGGAGCTCAAGTC TCAGCCTCCCAAAGTGCTGGGATTACATGAGCCATCGCACTCTGCTGTTT CTGAATTTTTTAAACAAATAAATATCAAGCAATCAGATGCCAAANATTAC

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## <sup>278</sup> Table 2

AAAGAAAATCAGTATCAAAAATTTGGAGTTTGAGGCCAGGCACGGTGGCT CAGGCCTATAATCCCAGCACTTTGAGAAGCTGAGGCGGCAGATCACGAG GTCAGGAAATCGAGACCATCCTGGCTAGCACGGTGAAACCCCGTCTCTAC TAAAAGTACCTCGGCCGCGACCACGCTA

>Sequence 1016

GGTACTATTATAATAAGTTAACATATTTCCCCTATATGCGGAAAATGCTG ACTATATCTTTTGGTTGCTTTGGAACACTATCTCCTCACAACAGTCCTTG TCTACAGAAATGGGAAAGGGAAGGACACATTTTGGTTTCTGCAACATGGC AACATTCGTAAAACCAGAAATGATGTGTGACAAGAAACTAAAGAACTGGA CGAAATTCACTTCCATTCACCCTGGTTAAAGCTTCCTTGAATCAGAGATA AGAAACAACATGAAAAATCTATTCCTTTTAGAAAACAAGTCTTTAACCCA GAGGTTGGTTTATTTTGAAAAGGAATTAGACTCTGGGCCCACATACCGCT CGTTCAAAATATAATGCTGTGGTTTCAACTCCTGCTAAATGTTGCTGTGA TAACTCAGACATCAATAATTCATTTTATTGGAAATAGGAGTAGTAGTATG AAATGCTAGCAGACTGTTTCATTTGCAGGGAGGCATTTTCTAATTTAAGC CTAGAACAATGCAGTCAGCTTTATTTGGCAAGCTAATATGAATGGAGGCA AAGCTGAATCGAAGGAATGGTTTTTATGATCTCCTCTAATCACGCTATTC TTTAGCATCAGTTATTTAAGTCTGACTTACCCACCTTTTGGGACCTTGGC AAAGTGACGAGAAAAGGATTTTTATAACTTTGTACCTGCCCCGGCGGCG **GTCGAAAGT** 

>Sequence 1017

>Sequence 1018

>Sequence 1019

>Sequence 1020

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>Sequence 1021

ACTTACAGTCTTAAGATATCCATACACCCCCACATCCGTCCTTTGTGCGA GAAGATTACTGAAAATTTAATTCCATTTATGTCATTGGATTTGTAAAAAA CCCCTTCTGGATTCAAAGATGAAGGCCTCACTTACTTTATTTTTGTCATT TTCACAGACCCCTTATGTAAATGCCTCAAGAGTAAGAATCTTGCTCAAGT GATTTTTGTATCTCCAATGGCTAACAAGGAGCCTGACATAGAGTAGCTGC TTGGTAAATATGTGTTCATTCATTCAACAAATACCCCCAAGGTAACCTTG GCCGGGACCACGCTAAGGG

>Sequence 1022

GGTACCGTGTGGGCCACTAATACATAAGCATCTGTGTTGGCTGGGGGTAG GTGTAGGGGGTGCTTGGGGAGAGATTTAAACAAACCCTTTCCTCTACTTG CAACATCTCTTAAAAGCTTGTCATCATGTTACTTCCTATTTCTTTAGAGT TCATTTGTTTAAGACGGAAACGTGCTTCATCTTGTTCGCTTTTTCTGCAT TCTTTGTAAACTTAATATTCTAATTAGCCCCAACACGGAAAAGAATGTAA TTTAGTAATAACAAGAGAAATAATAAAAACACACCTATTATGAGACGCTG GGAGAAAGGAATGGAGGTTAGAAGGAAGAAAGAGAANAAGGAGGAGGGGG GCTCAAGGAACTGTGGAAAACAAGTGTCATAGCTTACCTCATATTTAATC TTCTGCTTAAAAAGTTGTGAATGACTTGGAATGGGGTTACCAAATATTTC CGCCTAATAAAATTAATTGGAAAGCATTGAATTTTTACATAGTAAGGATA TTGCCACGCCCAGGGTTAAGCCTGTGTCCCGCCTTTGGAGGCCAAACCGG AGATTGTTAACCCAGAGTTCAAACAACTTGGAACATGAAAACCCTTT

TGAATTTGGCTTAATAAGGCGTTCATTN

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>Sequence 1025

>Sequence 1026

>Sequence 1027

GGTACTAATTCTTTTCCTCTTTCCTAGACCGATTCTAGTTTGTTGCCTTC
CCTTTCCTCGGAAACCCCAAGTTTGTGGATGCTGCAGACACTCTGTGCCC
CCCTGCATGCTGGGTGCCTGGCCAGCTGCCAGGGCATAAAGACAGAGACG
ATGTGGCCTTTGTCCTTAAGAATGAGGTTTGAAAGCCCCAGTTCTTCCAT
GTTAGGTGATTTCTTGCAGCTCTTGGTATCTGCAGAATTAGTGTGAATGC
TTAAAAAAATATTAACAGCTTTATATCATGAAAGTTTNAACATGTACCTGC
CCGGGCGGACGCTAGAAAGGG

>Sequence 1028

>Sequence 1029

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TCTGAGGGTAAATGAATTATTGAACTGCCTATAGGTTGCACAGCATACCT ATAGAAATGGTGGCACCAGATTTATTTTGCGTTGAGAGCGCATGTGGCTA TTTAGGGTGTACCTGCTTTTCCCAAAAGGGTGGCTAGCGTGAGCTTACCT TCTGGTATTCATGGAGGAAT

>Sequence 1030

GGTACCATTGTTTTGTTCAAAATCACAATTTAAATACTTCGTGATTTTAG
AAATAATGGAGCCACGTTTTCACCATTAAGGTGAGTGATTGTTCAGATAC
ATTTGGCACTGTCCATAGGTTTATGGCTTCCAACTTGTTTAAGACCATTC
CCAGAGTGAGAGCTGATTTGCCATGGTTATGAAGCTTTCAGGATATAAAC
TATAAGAATGACAAACTACAGCAGTTGAAAATGTGTCTTCAGATACTCAC
TTGCAACTCCCATTTATGTCTCTAGGGATTGAGAAATGAGGATCGAGGGA
CCAAATCTGGCTTGGTCAGTAAGAGTGTAGGTAACATATAAATATTAATG
TTCGTTGCAGTTAGTGTGGTACCTGCCCGGGCGGCCGCTCAAGGG

GGTACAGTGGTGTATCGCAGCTCACTGCAGCCTCAACCTCCCGGGCCCA
AGCAATCCTCCCACCTCAGCCTCCCCAGTAGCTGTGTTCCAAAGAAATTT
ATTTATAAAACAGGTGTTGGGCTGGACTTGACCCGTGGGCCACAGTTTGT
CAACTGCCATTCTGTAAGCTTAACATGTGTTAATTACTGCAATCTGAATA
ACAATGCTATGATATAGACACTGTTTCCTTTTAATAGACAAAGGAACCC
AGGCACAGAAGGATTGACTAATATGACCAAAGTCACACTGCCAGTGAGTA
GCAAGCCTGAGCTCTGAACCATGACAGTTCACATCTTCCACGACAGCAGC
TTCTCAATGCTCTTTGGAGGGACCAGAGCCCAGGCAGTAGCAACGGCTAT
GAGGTGGTGAGACATGACCAGCAGATAAGCCCTGGGCAATTGGCCAGAGC
TGGAGGGAGTGGAGAACTAGCCATNTGTGACTTTGTGAACATCCCTGGGG
AGTCTGGAATTACCCAAGAG

>Sequence 1033

>Sequence 1034

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>Sequence 1035

>Sequence 1036

TGTATATGGGAGTCGACCCACGCGTCCGGTTCGAGCGGTACCACGAGGAC GCACATATGCTGGACACTCAGTACCGCATGCATGAGGGCATCTGTGCCTT CCCCTCTGTGGCGTTCTACAAGAGCAAGCTGAAGACGTGGCAGGGCCTGA GGAGGCCGCCCAGTGTCCTGGGCCACGCTGGCAAGGAAGCTGTCCTGTCA TCTTTGGCCACGTGCAGGGCCACGAGCGGAGCCTGCTGGTGTCCACGGAC GAAGGGAATGAGAACTCCAAGGCCAACCTGGAGGAGGTGGCTGATGTGGT CCGTATCACCAAGCAGCTGACCCTGGGGAGGACCGTAGAGCCCCAGGACA TCGCCGTGCTCACGCCCTACAACGCGCAGGCCTCTGAGATCAGCAAGGCC CTTCGGCGAGAGGGCATCGCCGGGGTGGCCGTGTCCTCCATCACCAAGAG CCAAGGGAGCGAGTGGCGCTATGTGCTGGTGAGCACCGTCCGCACCTGTG CCAAGAGCGACCTGGACCAACGGCCCACCAAGAGCTGGCTCAAGAAGTTT CTGGGCTTCGTTGTGGACCCCAACCAAGTGAACGTGGCTGTCACGCGGGC CCAAGAGGGGCTCTGCCTGATCCGAGACCAACCTCTTCTGCGCTGGTTGG CCCTTTGGCGTAACCCTCCTGACTTCTGGGAGGCTCAACAAACCCTTGT GCCTGCCCGCCAGGTGCGCGTCTTGAGGAAGCCAACTATGCCTTTCTGAA GAGCCCTTTTCACCTGCAGGTCCCAGACTGGAGGGAAGATCAGGGCCCCC

>Sequence 1037

>Sequence 1038

CCCTTTCGAGCGCCGTTCGGGCAGGTACTTTGACTATTTTTTAGCAACA
AATTACTTTTGACACACAGCACAATTGATTTAACACTTCCAATTTTGGAA
CTATTGGATAAATAATGATGGGATTTAAATAAAGCAATCCGATTCTACTA
TTACAGCATAGGGTCTCTTGTAGTCCTCTTAGTAAAAACTATTGTGACAC
TTCCTTCTTTCTCCAAATATTCGGCCTGGAAAGACCTAAATACAATGCAG
GGATTGAATCAAATTCACACATTTTTTTTTCCTACGGAAACAACCATTT
CTTGCTTATATTTAACAAAAACTAGTA

>Sequence 1039

GGTACTTAGATCAGATGGATTGAAACATGACAGCCCCATTTCATCTGGCC GGTTAAGGTCCTCATGGAATGAAAAACACTTTCGGGCACTCTCCTATGAG AGAGAGAATGGGTTTCTTTAATTGCCAGATTGTCTGAACACAGCCTCAGC

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TACTTCTAGGAATAAGACGAAGCAGTGAGGAAGTTGCCAGTTGAGTGATT CTTGGGGAAAAAAATTAGCATTCAGTGCCAGCTCTCTAAAGTGTGGATTC TGGATTCTGGTAGAAGCCAGTAAAGAAACGTTTTCTCTGGAGTGGAAGCT AGTAAGATTTATTCTGTGGTGATGAAGCCATCTGAAACCTTACAAGCAGT GTGGTTGTATCAGCATATGGGAGCTGACTGCCTCAGGACTTTGG

>Sequence 1040
ACTCTTATCAACTGTTTTATAGATGAGAAAACATTAGCCACAGCTTAGCT
TATTTGAAGTCACAATAATATTAACTAAGTAAGAGCAAAAGCCAAGATTC
AAATGTAGATTATTTTACTACAGACTGAGAAACGAATTAAACTAGGAGCC
TAAGATACTTTCTGGAATTGAAATGATACATTATATATACCTATAAAGAT
AATTGGCTATAGCTTCCTAAACTACAAATTGTCATAAAAATGACTTCTGT
CCTATATCAATTAGAAACTGGTATTAAAAATTGAGTATTATAAGACAATAG
AATGTC

>Sequence 1041

>Sequence 1042

GGTACCCTGCTTTGATTATTTCCGAATCCAGTGGGTAGAGAAGGTAAAGG CAAGGGCTCACTGGATATTTTTAAATTGTAGGGATGTCCTTTGCTCTGGG TCAATTTTAGGATCAAATATAAAAGCACCTATAGCTCAGAGTATCTTCTA ACATAAAACTTCTGAGATACCAGAAATTTTCCAAAACATGGTATAAACAG TATGAAACACTGGGTAGATAAAAGCTTTCTCTAAATCTTAAAGTGCTCAA ATATCATGACCTGATTTTTTAGTTTTAGAAATCAGATATTTTTCTATTCC ATATCTTAAACTTTN

>Sequence 1043

>Sequence 1044

>Sequence 1045

>Sequence 1046

ACAGCACTITCAAAGTAGTGGAATATAAATCTTTCCATTTAACAGCAACA TTCAAATATTTCCCATTCTGCTTATTATTCCTCTCTGAAGGTGATACATA GAAATATAGGAGCAAACACAGCAATGCAGGCGCTCTATGATCTGGTTTGC TCACATAGATCTTAAAAGGAGAAGAATGAGGGATTTGCCTACAACCCACA GCCAATCTATGTGGACACAAAGGGTGACTTCTTCCTTCTATTACGTTCCT

Page 62 (of 261 pages in Table 2)

TGAGGTAGAAATGGTAAACTAGCATGACCTCGAATCATAATTTAATATCA

>Sequence 1047

>Sequence 1048

ACAACACTTTAAAAAGTGAATTATAAGCTATGTGAATATCTCAATAAAAA CATTTTTTAAATAAAAACAATTCCCAAAGGCCTGGAAATTCAGGAACATA ATTCAAAATAATTTATGGATCAGAAAATAAATCATATAAAGATCTGAGAA CTACAATGTAAAAATATAGAAAAAAGTCATAACACTATTAGATAAAAATC TGAGCTGGATAACAAAGATAGTACC

>Sequence 1049

ACCTATAAACAAAGGCATCATAAATAGATATAAAGCCAGAAGAAAAGGGA TCTAAAGTAGACAGAGAAGATAGGCTGACTCTCCAGTTGCAGATTTTCAT TATCAGCTCATCACACCACCGAAACTCTCTGGTGATTTGCTATCCACATC CATGGCGTTTGGTGGCCCTAAAGATTGTAACGGCCCCCATCCTCTTGGTT AAAATGGCAGGTGTGTTGACAAGAACTGTCTTAGGTACC

>Sequence 1050

ACCTCTCATCTCCAAATCAACTAGACTCTTATGTTAAGAATACTAACAAG AAAAAATCCAAACCCCCAATAGAAAAATCCCCAACAACAACATATACCCT TAAACACAAGAATTGTATTATTCAATGAAAGCAATACAAGTAAACACAAC AGTTACCTTGGCTATTTTTTCAATGTACC

>Sequence 1051

>Sequence 1052

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AAATGCTTAATATGGCAGTATAATAATTATAACTAGATTTACTTCAAAAC
ATAGACATAAAGAAGATTACATGCCTGTAGAAGTTCATTGAATTAGGAAT
CACATGCTATTTATTTTAGCAGATATCTTCTTAATTAAATGTTTGACCCA
TGTGAAGTCATTTAACAGATCTGTTACGCATTATTCACATATGCAAAATA
ATCTATATGATCTGAATACCATTTCCATCTTTAAAATTACATATTCCT
>Sequence 1053

>Sequence 1054

ACAATGAAAATTACAAAATACTGTTGAGAGAAATTAAAGAAGACAAATAA ATGAAAAGAGACGGAACATGTTTTCGCTTGTAAAACTCAGTAGGATTAAG ATCTCTTCTCCCACGACTCTATAGCTTTAAAGCAATCAAAATCAGACT GGTTTTGTCTGAACGTTTTTGAATAAGTCAATGGCTTATTTCAAAATTCA TATGAAATTTCAAATGCCAAAGAATAGGCAAAATATTTCAGAAAAGAAGA

Page 63 (of 261 pages in Table 2)

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>Sequence 1055

>Sequence 1056

ACATTAACTCACTGACTTACTCTGGGTTGCTATTGTATTAAAATTCTGTA
TAGACATTACGTAGCCTCAGAGTTGAATTTGGACTGCCCTTAAAATAAAA
AATTCTTAAATCTTTAGTGTGGTGTCTATTAATTTTTATGATGATTTACA
AGTTGGAAATGATTACTTTGCAAGTCATAGTTTACTTTGAAGTTAATAAG
AGTGATTACAGTAAAGGAAAAATGCCATATATGGCATTGTTCTTAACAGC
TTATGAAATTTGGAAAACGATATTTTAGAAAGCTTTCTCTTGTTGGCTGG
AATGAAGTGGAGACCCTGCTG

>Sequence 1057

ACAGCTTGTTCAGGATATTTCTTCTATTTTTCCTTTGAGTTCTTGTTCAT
ATTCTAGTTAATTTCTAGTAGTTCTTAATGTATTTTAACCAATAGACTTT
TGTCTTCCTTCTGCTTATGTATTCCTCGTAAATGCTTTTTTGTGACTTGTC
TAAGTATAAACAACTTTACTATTAGCTGTAAAATTTTCATTTTTAGTATG
TCATCAATCTTTTTTTTGTGTTTAGTATGATTAAATGTTTTTCACTTGGAA
AGATATGAATAGTCTACTTCATTGATTTTTTTTAAAGTCATTTCATTTTT
TATTTTTGTAGCTACAAAATCATAAACN

>Sequence 1058

>Sequence 1059

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AGGCTTATAAATTTGGTCAAAAAGGTGGGGGGGGATATAGGGCCCCTTAC CATTATATATGTGATTTTTAAAATTGGCAATCATGTTTT

>Sequence 1060

>Sequence 1061

>Sequence 1062

>Sequence 1063

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>Sequence 1064

>Sequence 1065

GGTACATTGAAACAATATAGTAGTCTTCCCCTTTACAAAGCTGAATTAAA GTAAAAGTGTGTGTGGNGAATAATAGGGGAATGTNGGATTGGTAGCTGT TTAATANAAGATTTAGGATACATTATAAAATTGCTTAAGGGCCAGGCGCT GTGGCTTTACGCCTATAATCCCAAGCACTTTGGGAAGGCTGAGGTCGGGT GGATCANCCTGAGATCAGGAGTTCGAAGACCACCCTGTTCAACATGGTGA AACCCCATCTGTACCTGCCCGGCGGCCGCTCGAAAGGG

>Sequence 1066

>Sequence 1067

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> Page 66 (of 261 pages in Table 2)

GCAGACATCATTCTATTATCTCAACCTTGCTTTCTCGGATCCAAAGCCAA GAAGTTGCTGTTCCATGCCCTTAGAGCTCTAATTTGGCACCTTTTCCTGA AATGAAAGCTTGAAAGGGCTTTTTGCTTTGGTGAAACCGGTTCGTGGCCC GGGCAAATTCTGGTGGTTTCGCGTCTGTCAGTGGGTCCTAATAACTGTTA TAAGTGTGGTTCTTGGGAACATTTGTAAAATATTTTCTATTGGTCACACA CCTTTTCTGTTTAGACATTTATTTTTAACACAGACAAATGCTTAAGTGTT CCCGCCCCAGGGTTCTTAACTT

>Sequence 1069

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CAAGGGCTCACTGGATATTTTTAAATTGTAGGGATGTCCTTTGCTCTGGG
TCAATTTTAGGATCAAATATAAAAGCACCTATAGCTCAGAGTATCTTCTA
ACATAAAACTTCTGAGATACCAGAAATTTTCCAAAACATGGTATAAACAG
TATGAAACACTGGGTAGATAAAAGCTTTCTCTAAATCTTAAAGTGCTCAA
ATATCATGACCTGATTTTTTAGTTTTAGAAATCAGATATTTTTCTATTCC
ATATCTTAAACTTTCATGTTAAATTCTAGTTCTGACAATGTAGGGTTCTA
TTTTTTTCAGGTGATTGTTGGGAGCGTATAGAAGCATATATAAATATGGA
ATATGTGTTTCTTTTTTCCCCTTCTGAAAGAAAGTCAAGCCTCTAATCAA
ATAGATTGATGCTTCAGAAACTTAACAGAATATTATCTGCAATTTGGCAT
AAATGCATNTTTCTTGGGGAAGTTTCCATGGTCAAAATTATTAGTCATTG
CAAAACAGAAAAGTTTGACAACTGGAAATGCAGACNCTTTTGCTTGATTN
TGTAAAGACAGGA

>Sequence 1070

>Sequence 1072

GGTACTTTTTTTTTTTTTTTTTTTTTTTTTTTGGACGGAGTTTCACTCTTGTTGC
CCAGGCTGGAGTGCAATGGCGCAATCTCAGCTCACCACAACCTCTGCCTC
CCGGGTTCAAGAGATTCTCCCGCCTCAGCCTCTTGAGTAGCTGGGATTAC
AGGCATGTGCCACCATGCCTGGTTAATTTTGTATTTTTAGTAGAGACAGG
GTTTCTCCATGTTGGTCCGGCTGGTCTCGAACTCCCGACTTCAGGTGATC
CTCCTGCCTTGGCCTCCAAAAGTGTCAGGATTACAGGCGTGAGCCACCAC
GCCCTGCTTAAGTTTTAATAAGATCTCTTGGCAACTTTTTACGACTGGCA
ACTTAGGTCTCACAAACACAGAAAAGCTTGTCTTTAAGTATATTGTCTTT
GAAAAGTTAATACACTCTCTAAATGCTCCATTTAAAATGATTTACTTTAT
AAATGCATGCACTGAGAGAAAAGATATTTGAATGATATACANCCACATGT
TAAATTAACTGTGATTGTTTTCTAAGTATTGGCACTATGTCAATTTTCTT

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TTTCTTGTTTATGCTTTTCTGAAGTTTTCAACCCCCATAATAAAGATGTA
TCTCTTCT

>Sequence 1073

>Sequence 1074

GGTACTGGGTCACTCTGCCCCAGCTCTCCAAAGGCATCAAGATCCGACTG CTAGGAGCCCCGGCTTCTTCCCTGACCTGCCGTCTCCTACACCCTCTGG TCCTGCTCCACACTGGTCTAATAACTGGTGTTCCACATTCCTCTAACGTG CACAACACAGTCCTGCCCCCGTGCTTTTCACCTCCTGTCCATTCCTCTTA TAACGCTCTTCCCCAAATCGCTTGCCCATGGCTTGTTTGCTCATCTCAAG GTAGAAACAAACTGTCGCTCAATCAGCTAGAGCCCTCCCACTATGCTCCC GCGTACCTGCCCGGGCCGGCCGGTCAAAGGG

>Sequence 1075

>Sequence 1076

>Sequence 1077

GGTACAGAGTAACCATGACTTACTAGGTGTTATGATGAAGGTGTATGTGT GTGTATATGTGTGCATGCATGTNATAAGTGTGTGCATTTGCACACATAAG

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>Sequence 159

TGGCTATTGAGACCTCACCGCGGTGGCGGCCGCCCGGGCAGGTACACAGG
ACCAATGCTGCCCATCCACATGGAATTTACAAACATTCTACAGCGCAAAA
GGCTCCAGACTTTGATGTCAGTGGATGATTCTGTGGAGAGGCTGTATAAC
ATGCTCGTGGAGACGGGGGAGCTGGAGAATACTTACATCATTTACACCGC
CGACCATGGTTACCATATTGGGCAGTTTTGACTGGTCAAGGGGAAATCCA
TGCCATATGACTTTGATATTCGTGTGCCTTTTTTTATTCGTGGTCCAAGT
GTAGAACCAGGATCAATAGTCCCACAGATCGTTCTCAACATTGACTTGGC
CCCACGATCCTGGATATTGCTGGGCTCGACACACCTCCTGATGTGGACG
GCAAGTCTGTCCTCAAACTTCTGGACCCAGAAAAGCCAGGTAACAGGTTT
CGAACAAACAAGAAGGCCAAAATTTGGCGTGATACATTCCTAGTGGGAAG
AGGCNANATTCTACGTAAGAAGGAAGGATCCAGCAAGAATATCCAACAGT
CAAATCACTTTGCCCAATATGAACGGGGTCAAGAACTATGCCAGCAGGCC
AGGTACCCTTGGCCGTCTAGACTGGTGGATTCCCCGGCTTGAAGAATTCC
ATTTTAAGCTATTATTACGTCAACTTGAAGGGG

>Sequence 160
TGGATGATGNATTGGTAGGCCTCATCGCGGTGGCGGCCGCCCGGGCAGGT
ACACAGGACCAATGCTGCCCATCCACATGGAATTTACAAACATTCTACAG
CGCAAAAGGCTCCAGACTTTGATGTCAGTGGATGATTCTGTGGAGAGGCT
GTATAACATGCTCGTGGAGACGGGGGAGCTGGAGAATACTTACATCATTT
ACACCGCCGACCATGGTTACCATATTGGGCAGTTTGGACTGTCAAGGGG
AAATCCATGCCATATGACTTTGATATTCGTGTGCCTTTTTTTATTCGTGG
TCCAAGTGTAGAACCAGGATCAATAGTCCCACAGATCGTTCTCAACATTG
ACTTGGCCCCACGATCCTGGATATTGCTGGGCTCGACACACCTCCTGAT
GTGGACGCAAGTCTGTCCTCAAACTTCTGGACCCAGAAAAGCCAGGTAA
CAGGTTTCGAACAAACAAGAAGGCCAAAATTTGGCGTGATACATTCCTAG
TGGAAAGAGGCAAATTTCTACGTAAGAAGGAAGAATCCAGGCAGAATATC
CAACAAGTCAATCACTTGCCCAAATTGAACGGGTCAAGAACTATGCCAGC
AGCCAGGGTCCTCGGCCGCCTAGAACTAGTGGA

>Sequence 161

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>Sequence 162
GGCGGCCGAGGTACCTGGCCTGCTGGCATAGTTCTTTGACCCGTTCATAT
TTGGGCAAGTGATTTGACTGTTGGATATTCTTGCTGGATTCCTCCTTCTT
ACGTAGAAATTTGCCTCTTTTCCACTAGGAATGTATCACGCCAAATTTTGG
CCTTCTTGTTTGTTCGAAACCTGTTACCTGGCTTTTCTGGGTCCAGAAGT
TTGAGGACAGACTTGCCGTCCACATCAGGAGGTGTGTCGAGCCCAGCAAT
ATCCAGGATCGTGGGGGCCAAGTCAATGTTGAGAACGATCTGTGGGACTA
TTGATCCTGGTTCTACACTTGGACCACGAATAAAAAAAAGGCACACGAATA
TCAAAGTCATATGGCATGGATTTCCCCTTGACCAGTCCAAACTGCCCAAT
ATGGTAACCATGGTCGGCGGTGTAAATGATGTAAGGATTCTNCAGCTTCC
CCGTCTCCACGAGCCTTGTTTACAGGCTTTCCACAGAATTAT
>Sequence 163

TTATTATCGATGCGCACCACGCGTCCGGGTGGCTCTATGTAGTTCTAATT
TGCATTTCTCTAATGACTAACGATGTTAAACATATTTTTATGTACTTGTT
TCATGTACTTGTTGATATGTCTATTCAATTCCTTTCACCATTTTTATGGA
GCTGTTTTTTTATTATTGAGTTGTAGGATTTCTTTATATATGCTGCATAC
CAGGCCTTTGTTATATACATGCTTTGCAATGTACATTGTCTTAAAATCTG
TGGCTTGCCTGTTCAATTCATTAGTGGTGTTTTTGTTAAGCAGTTTTTAAT
TTTGATGAAGTGTAACTTATTCATTTTTTATTATGGTTATTGCTTTATGT
TTCAGGTCCCAAATTTTGCCTTCTCACAAATCACAAACATTATCCTATGT
TTTCCTTCAAAAATTATATGGTTTTTATGTATTTTCAATCTCAAAATATTC
TCTAATTTTTTTGCTGATTTATTTACTAAAGAAATTTGAGGGATTTGCTA
TAATGTTAGGGATTTTTCTAGATGCCACT

>Sequence 164

>Sequence 1078

>Sequence 1079

GGTACAGCTCACATTCATGGGGAGGAAAATCAGGGCCTGTCTTTAGATAG GAGATGTATCAAAGAATTTGTGGACATATGTTAAAATCACAGCACTACTC TTGATGT

>Sequence 1080

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AAACAAAGTGGCCATGGTGGCAGGATAGACTTTCTCAGCAACATGGACT
TTCACTCACCAAGGCAGACCTGGCTACAGCCACTGCTGAGTGCCCCATTT
TCCAGCAGCAGTGCCCAACACTGAGCCCTTGATATGGATCATTCCTTGGG
TGATCACACAGCTACATGGTGGCAGATTGATTATATTTGGACTTCTTCCAT
CATGGAAAGGGCAGAAGTTTCTCCTCCCTGGAATGGACACTCCAGATATG
AGTTTGCCTATCCTACACGCAATGCTTCTGCTAAGACTACCATCTGTGGA
TTCACGGAATGCCTTATCCACCGTCATGGTATTCCACACAGCATTGCCTC
TGACCAAGGCACTCACTTTACAGCTAGTTGTGACAGTGGGCTCATGCTCTT
GGAATTCACTGATCCCACCATGTTCCCCACCATCCCGAAGCAACTGGATT
GATAGAATGGTGGAATGGCCTTTTTGAGTCACAATAACAATGCCAACTAA

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GTGATAATACTCTGCGGGGCTTGGGCAAATTTTTTCAGAAAGCCATTGTT GCTCTGAATCAGCATCCAATATATGGCATTGGTATTCCATACCCAGGATT ACAAGTCCAGGAAATAATGGGGTGGAATTGGAATGGATTACTTAACATTA GGTGGTCTAAAGGTTAGATCCCAAGGAGAAAGTTCCACAGAA

GGTACACGATGTGGCTGACATTTGGCTGGAGTCTGCTAAGATGTCTTCTT ATGCTGGATGGACGCAGACCTGTAACACCTCTGTTTTTCATCTTCTCCAC CATATTTTTCATCAGCCGCCTCATTGTTTTTCCTTTCTGGATTTTATATG TTCCTCAACCTACAGCTCATGATCTTGCAGGTCCTTCACCTGTACTGGGG TTATTACATCTTGAAGATGCTCAACAGATGTATATTCATGAAGAGCATCC AGGATGTGAAGAGTGATGACTAGGATTATGATAAAGAAGATGAAAAGGGGA GATGAAGAGGCTACCCAAGGCAAAGAAATGGATTGTTTAAAGAACGGCCT TCGGGCTTGAGAGGCACCTCATTTCCAATGGGCAGCATTGGCCTTAACTG GAAGCCTACAGGAACTCCTTGGCACCAGTTGCTTAAAGTAACTTGCCCGG CCGGCCGATTGAAAGGGGGA

>Sequence 165

TCTTCCATACTTCGTAACTCTATACATTTACCATTGTTATCATCTACTAT **AATTATCCATCTTATACTTCCGAACTCGTTTAATAGTATTTATCTAATTA** TTATATAATTTCTATTTATAAATTACTTTCNACTGCNAANAGCCNTTGTG TTTTTATCCGCCTGACGAACGCGCAGGNACCGGCATCAGCATTAGTAATC AACCTGTTAATCCAAGGTCTTTAGAAAAACTTGAAATTATTCCTGCAAGC CAATTITGTCCACGTGTTGAGATCATTGCTACAATGAAAAAGAAGGGTGA GAAGAGATGTCTGAATCCAGAATCGAAGGCCGTCAAGAATTTACTGAAAG CAGTTAGCAAGGAAAGGTCTAAAAGATCTCCTTAAAACCAGAGGGGAGCA AAATCGATGCAGTGCTTCCAAGGATGGACCACACAGAGGCTGCCTCTCCC ATCACTTCCCTACATGGAGTATATGTCAAGCCATAATTGTTCTTAGTTTG CAGTTACCCCTAAAGGTGACCAATGATGGTCACCCAATCAGCTGCTACTA CTTCCTGTAGAAGGTTAAATGTCATAATTCTTAGCTTTTCAGGAATAACT TTACCCTGGCACTATTAATGAAAGCTCTACCGGGGTGCCTATGTCTTAAG GGTGGTTTGGACCTGCTTCAAATATTTTCCTTCACCTTTCCCATCTTCCA GGGGTCCTTGGGCGGTCTGAACTAGTGGGATCCCCGGCCTGCAGGAATCC ATATCAACTTATATGTCCCGCGCCCTCAGGGGGGGCT

>Sequence 166 TTCTATTATTCGTTGATCGACTATTCCTTCTTCGGTNTATTGATTGAACA GTATTCATTACTTCTATTACTTCTTTTTATACATCCATTATCGTCTGTTT ACGATGTTTATCTATTATTATGTTCCTACATTATGTTTATTACNNNNAAG GGTCGTTGCTTTGTAGCGCNCTCTCCNAGTGGCGGCCGNGCGGGCAGGTA CTTGCTCAGCCTTGCCAGGCCCCTCTGATGAGCTCTCTAATCAGCAGGAC AAAGGTGGACAGCCTGTTCGTCTCTCATGTCAGCCTAGGGCTGGGAACAG TTTGTGAGGACTTATCTGTTGTACCT

>Sequence 167

CCGCCCGAAGTACGTNTCCGCTAATATTGATGGCAATTTCTACGTTATT CTCAACTCGTTTTCATGTTACTTATATGACATCTACATCATCAGTTTATA GTACATAATATNTNTTNNAATGTATGTGCTGGTAGCGGGCTGNCGNCCGG GCAGGTACGCGGATGGCACGTGCAGCGCAAGTAGGTCTACAAGACGCTA CTTCCCCTATCATAGAAGAGCTTATCACCTTTCATGATCACGCCCTCGGA ATCATTTTCCTTATCTGCTTCCTAGTCCTGTATGCCCTTTTCCTAACACT CACAACAAACTTACTAATACTAACATCTCAGACGCTCAGGAAATAGAAA CCGTTTGAACTATCCTGCCCGCCATCATCCTAGTCCTCATTGGCCTCCCA CATCAAATCAATTGGCCACCAATGATACTGAACCTACGAGTACCCT

>Sequence 168

CTTGTCCTTTCACTTCACACATTTTTCCAACTTCTATCTTAATATCACAT

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TCTCTATATTTTCTTTTTTAATATAAAATATAATATAGTCTATCATATTGT ATTAATNNNNNTGTTAAGTGTGCTGTAGCGGGCCGCCGCACGCTGGCAT TGCATCTTCAGGAGACGCTCGTAGCCCTCGCGCTTTTCCTAGGACAGTTC GCGGAAGAAGTGGCTCACGCCTTCCAGAGCCACATCATCGCGGTCGAAAT AGAAGCCCAGAGAGAGGTAGGTGTAGGAGGCCTGCAGGTACCT

>Sequence 169 CCGTGTGCCCATTGANANTCTGNCTTACCGNGGNGCCGGCCGCCCGGGCA GGTACTTCCACTATTATTGAATGTATTCTGTATTATAATTGTATATTTGA TTGCCTATCTCCCCTCAACTGCATTATACATTTTCATGGGTGAGCCAGTG TCTTTTTCACTCTATTTCAGTGCCCTGCACATTTTCTGGCACATAGTAAG CATNCCCATGAGTNATCTGATGNAATAAATGTANTTTCCCTAAATTCAGG TTCAGTATNCCTTAATCTGNAAAATACTAAAATCCGAAATGCTCATAAAA TTCAAAGCTTTTTTGAGGACCTGACCTCGTGCCTCAAAGGAAATGCTCAT TNGGAGCATTTTGGACCTTCAGAATTTTCAAGATTANNGGGATATTCATA CCCGTAAGAATAAGTGCTCAATATTTCCCAAAATNTNNCAAAAAAGTCT TTGAAATCCCCAAAACAACTTTTCTGGTCCCCAAGGTATTTTTTGGAAAT AAGGGGATTACCTCANACNNCTTGTACCGTNNAAAATACCCATGCANNNT ACTINITICGATTAGGCACCCATGTGAAAGGGGTATCTTTCTCTTANNAAA TTGANACCCTCATTGGGNNTTTCGTTCTTCAAGCCAAAACTTGACCCTGG GGCCCCACTTTCAACATGNNNGCTTTTAATTCCGTGCCCTNGGATGTTAA ATGGCCATGGTTCCTCTTTTTTTACCACATAAATTTCAATGGCCCCATCA AGATTGAATATTCACATTTCGACCATAACACTGGCCATTCAAGGTCCCTT CAACAAGCCCACTCATAANGGTTTTCCTCCTCTCTCCATCCAATTTTTGG TTCCTTATGAAAATTTCTACCTTTGGCTTTCCCCCAGGAAACCTTTAAGT AGGTTTCTCGGTCAGGTCCCGCAACACCACCGCAACGCGGGGTCCTCCGC GTAACCTTCGGCCGGTTCTAGACCTAGTGGGATCCCCCGGGCCTGGAGGA AATTCGAATTCAAGGCTTATCGATTCCG

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>Sequence 173

AGAATGACCCCTTACGCGTGGCGGCCGAGTACGCGGGATAGGTGGAAAAA
AACACTGCCATTCACAAGTCAAGGAACCCAGGGCCAGCTGGAAGTGTGGA
GCACACATGCTGTGGAGCACACATGCTGTGGAGATTGCAGTGTCTGAG
GTTTGTGTAGTAGTAGTGGAAGATTTTAGGTATGTAGAGCAAGTTGAAATGGA
TTGAGACTGCATGGGGGCATAAATGAGAAATTGCCTGTAGCATCTAGTCT
ACTTGAAGGAAGTGGAGACATAAGGAGAGACAAAAACAGGTTTGTGCCAT
AAAGTATTTTTTCAAAGACACCAAGATGTGGGTAAATGAAAATTATTAGT
TCACTTCCCTGCTGGCATGAAACTTTGCCTTAAGAAGGGTGGCTGGAATT
CCAAGGTTTGGTAAAGGGCAATTTTGGGTAAAGGACTGGCTTTTTTGAAA
TGCCTTATG

>Sequence 174

>Sequence 175

>Sequence 176

AATCAAGCGCATTATTCGTATTACTGTACGTAATACATCGACGTCTGCTA TATTATTGTATCTATGAGGCTATNTATATATTTANNNNAAGTTTGGTGTG CGCGACCGGCCAGGTACCAAAACCTGGGGATTAAGCTAAGAAGTCTGGTG GAGAGACTCTGTGGACGTAAAGAAGGGAATGAACACAGAGAAACTTTCAG CCAGATTCCTGAGTGTCACCTGAACAAGAAAAGTCAAACTGGAGTGAAAC GACAGGGACATGAGAGCTCATGCTGGACACAAACGATCTGAGTGTGGTGG GGAATGGAGAGAGCCCCCGGAAACAGAAACAACATGGGAAAGCCTTCA TTTCCCCCAGTAGTGGTGCACGGCGCACAGTAACACCAACTCGAAAGAGA CCTTATGAATGCAAGGGGTGCGGGAAAGCCTTTAATTCTCCCAATTTATT TCAAATCCATCAAAGAAACTCACACTGGAAAGAGGTCCTATAAAAGGAGG GAAAAAGGTGAGAGCCTTTACAGTTTTCAGTTTCTTTTGAAAACATGGAA AAATGCATACTTGGGAAAAAACGCTATGAATGTAAATACTGTGGAAAACC TAATCGGTTATTCCAGGTTATTTTAAATTCATGTTAGAAATAACACTGGG GAAAAACCTACCAAAGGTAACCATGGGGGAAAGGCTTTATTTTCCGAGGG TACCTTTGGGCACATTGAAATAAAACTTAACCGGCTGGT

CCGGCCAGGACGCGGGTGCTGTGAAGAGCTTTTGCATTGTGGGAAGTCTT TCCTTTCTCGTTCCCCGGCCATCTTAGCGGCTGCTGCTGGTTGGGGGCCG

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TCCCGCTCCTAAGGCAGGAAGATGGCGGCCGCACAGAAGACGAAAAAGTC GCTGGAGTCGATCAACTCTAGGCTCCAACTCGTTATGAAAAGTGGGAAGT GCCT

>Sequence 177

>Sequence 178

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CATTTTCACTAGTTCAGGATAGGAATATTCATCAGATTGTCTCTGTAAAA
GTGAATCACAAAAATTCCACCTGTGTAGGTGTGGGACTGGACAGCTGAGT
GACAGGGCCCTGGGAAGAACAGAAACCACTTTTCCTCTTTCCTCTGAAAT
ATCAGAAGTTAAAAATCTACTCTGAGTTATATGTGCATCAATTTTAGACA
TATTGCTGATTTTATTATGAAAATGAAGTGCTAAAGACAAAGGATATTTC
CATTCCTCTGGACAGGCAGCCACAGACCAGCACTGCTTGACCCATGTGTA
TACACATGTGTGCTTTGTACCT

>Sequence 179

>Sequence 180

TGANAGATTTGCGGNGGCGCCGAAAACTGATCAGACTGTCTCAGATCAA
GGAAAAGATGGCCAGAGAGAAGCTGGAAGAAATAGATTGGGTGACATTTG
GGGTTATATTGAAGAAGGTTACGCCACAGAGTGTGAATAGTGGAAAAACC
TTCAGCATATGGAAACTGAATGATCTTCGTGACCTGACACAATGTGTGTC
CTTGTTCTTATTTGGAGAAGTTCACAAAGCGCTCTGGAAGACGGAGCAGG
GGACTGTCGTAGGGATCCTCAATGCCAACCCCATGAAGCCCAAGGATGGT
TCAGAGGAGGTGTGTTTATCTATCGATCATCCTCAGAAGGTCTTAATTAT
GGGTGAAGCTCTTGACCTGGGAACCTGTAAAGCCAAGAAGAATGGAG
AGCCGTGCACGCAGACTGTGAATTTGCGTGACTGTGAGTACCT

>Sequence 181
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AACCATCCTTGGGCTTCATGGGGTTGGCATTGAGGATCCCTACGACAGTC
CCCTGCTCCGTCTTCCAGAGCGCTTTGTGAACTTCTCCAAATAAGAACAA
GGACACACATTGTGTCAGGTCACGAAGATCATTCAGTTTCCATATGCTGA
AGGTTTTTCCACTATTCACACTCTGTGGCGTAACCTTCTTCAATATAACC
CCAAATGTCACCCAATCTATTTCTTCCAGCTTCTCTCTGGCCATCTTTTC
CTTGATCTGAGACAGTCTGATCAGTTTT

>Sequence 182

>Sequence 183

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>Sequence 186
TGGGCCGATGGAAGCGCTCACCGCGGTGGCGGCCGAGGTACTCACAGTCA
CGCAAATTCACAGTCTGCGTGCACGGCTCTCCATTCTTCTTCTTGGCTTT
ACAGGTTCCCAGGTCAAGAGCTTCACCCATAATTAAGACCTTCTGAGGAT
GATCGATAGATAAACACACCTCCTCTGAACCATCCTTGGGCTTCATGGGG
TTGGCATTGAGGATCCCTACGACAGTCCCCTGCTCCGTCTTCCAGAGCGC
TTTGTGAACTTCTCCAAATAAGAACAAGGACACACATTGTGTCAGGTCAC
GAAGATCATTCAGTTTCCATATGCTGAAGGTTTTTCCACTATTCACACTC
TGTGGCGTAACCTTCTTCAATATAAACCCCAAATGTCACCCAATCTATTTC

TTCCAGCTTCTCTGGCCATCTTTTCCTTGATCTGAGACAGTCTGATCA

CCCCCTTTTTTTTTAAGAGAGGACACCGCCC

GTTTT

> Page 75 (of 261 pages in Table 2)

CACTTGACGGTACCTTGGGCGNTCTAAGACTAAGT

>Sequence 188 GGAGGATGTGCANNNTTNTTTTGAANANGCGACTCCACCGCGGTGGCGGC CAGATGCATCACAAAAGCAGAAGTGCCCTTTCAGCTCTTCTCTGTGCCAT TCCTTGTCAATTTCATGCTGCCTACAGCAACAGCATAATACTGCAAACAG CCATGATGTCANCTCGAAGTGNTCTCTGTGATTGACAGAGAGGGACACGT CGTAGTCAAGAGGTGTGCTCCTCAGAAGAATATCAGAACTCAACTCGCTG CTCTGCATGAAGAGCNAGCGGATGGGAAGTGATACTAGGTATGTAAAG GATGGTCAGTTACCTCTAAATGTAAGTTAGACCAGGACAGCCAGAATCAC CGAAGGTCTTGGTTAAGGTCCCTCTGTAACAAGGCCGTAGAAGGCCCAGA AATGTNGGTGACAGCGAGACACNATTTCTTAAACTCTTACANCTTGTTGT CCTTTTGTTTCCCAAGAAACTCAGTTATTCAATTTTTCCTGGTGCCCTAA CATACAGTAGTTCCCTTAAGATAAAACACTACCTACTTGCAACAAAATCA TNAGAAGTGCCAGAGCCATTACCAAGATGGGTTACCATAAGAATTAAAAA AATATTATTGCAAAAAAAATAAAGGTTCTAAAAGTTAAAAAATGGGATTA AGATGGTAACTCTTACCTAATTCCCTAAAAATGGCTTGTTATTAACCGAA CCGGCTTGGTACAAAACACCGTGGTTTTAATCTACCCGGAAACTTTGGTC TTAACTTCCCTTCCTCCCTGACAATCTTAAATACCT

>Sequence 189 CCGGGCAGGTACGCGGNGAAGGAAAGCAGCTGCAAACTTCCCATCTGCAG TGTTTGTTTGTCTCGGCTCCGGCCATCACTGCCACGATTACCCCTGGATG AATTCCTCAGTGGAAATATCAACAAGACTCAGCCCACCTGCACCCAGGTG ATTAAAAAGCTTTATTGCTCACACAAAGCCTGTTTGGTGGTCTCTTCACA TGGACGCGCGCGACATTTGGTGCCCTGACTTGGATCAGGGGACCTCCCTT GGGAGATCAATCCCCTGTCCTCCTGCTCTTTGCTCCGTGAGAAAGATCCA CCTACGACCTCTGGTCCTCAGACCAACCAGCCCAAGGAACATCTCACCAA TTTTTAATCAAGAATATTCTGTGAAAAAGACTAAGATATCAGAGAAATTA TTAGTGCACATTATTAGAAGAGAGCTTCAGATGAAAATAAAGATCAAGAA AAGACTCTTGCTTTGAGAAGACACAAAGAAATCACATCATCTTATTGGGA TTACTGGCTAGCCATATGCAGAAGATTGAAGCTGGTCCCCTTCTTACACC ATATACAAAAAGCAGCACAAGATGGATTACTTAAATGTAAAACCCAAAAC TATAAAAACCCCTGGAGGACAATCTATGCAATACCATTCTGGACATATGA AAAAGCAAAGGATTTCTGTGCAAAACACCAAAAGTTATTTGAACCAAAGC CAAAAATTGACTGGTGGGATCTAATTAAACGTGAGAACTTCTTGACAGCC AAAGGAAATTGCGGCCGAGTAAATAGACCATCTTAATAATGGGAGAAAAT ATTTGCAAACTATGCTATCTTCAAGGGCTTATTTTTAGCCTTTATAAGGT TGTTTCCAAATTCCC

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AGAGACTCCGGGATGACTCCTGCTCAGATTCAGGCCTTGCTCAGGAAAGGG
GAAAAGTTTGGTCGAGGATGATAACTCCCGATGAGGTTGTGACATTGGGAAAC
TTTGCAATGCCCCGAAGACTTAACTCCCGATGAGGTTGTGGAACTAGAAA
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TGAACGCGCCTTCTGATTGGGACAGCCGTGGGAAGGACAGTTATGAAACG
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>Sequence 191
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>Sequence 192

>Sequence 193

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>Sequence 194

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TGATATCATGTACGTCTGTTCCTTTCTCAANCCNTTGGGCNAGATGATTT
GGGAGACNCTCTCCGCGGAGGCGGCCGCAGCGGCAGCTACAACAACCGCG
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CGTACCT

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>Sequence 196

>Sequence 197

>Sequence 198

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quence 199
GTACTTGCTCAGCCTTTCCAGGCCCCTCTGATGAGCTCTCTAATCAGC
GACCAAGGTGTGAAGTGGGAATGAACATGGATCCATCCCATTGGATGG
AAGAAAGGTGGACAGCCTGTTCGTCTCTCATGTCAGCCTAGGGCTGGG
CAGTTTGTGAGGACTTATCTGTTGTACCT

quence 200
AAAGATGGCCAGAGAAGAAGCTGGAAGAAATAGATTGGGTGACATTTGG
TTATATTGAAGAAGGTTACGCCACAGAGTGTGAATAGTGGAAAAACCT
AGCATATGGAAACTGAATGATCTTCGTGACCTGACACAATGTGTCCC
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TCTCAGATCAAGGAAAAGATGGCCAGAGAGAAGCTGGAAGAAATAGAT
GGTGACATTTGGGGTTATATTGAAGAAGGTTACGCCACAGAGTGTGAA
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CAATGTGTGTCCTTGTTCTTATTTGGAGAAGTTCACAAAGCGCTCTGG
GACGGAGCAGGGGACTGTCGTAGGGATCCTCAATGCCAACCCCATGAA
CCAAGGATGGTTCAGAGGAGGTGTTTTATCTATCGATCATCCTCAGA
GTCTTAATTATGGGTGAAGCTCTTGACCTGGGAACCTGTAAAGCCAAG
GAAGAATGGAGAGCCGTGCACGCAGACTGTGAATTTGCGTGACTGTGA
ACCT

quence 205
ATGTGNTTTTGAAGCCTCTACCGGGTGGCGGCCGAAAACTGATCAGAC
TCTCAGATCAAGGAAAAGATGGCCAGAGAGAAGCTGGAAGAAATAGAT
GGTGACATTTGGGGTTATATTGAAGAAGGTTACGCCACAGAGTGTGAA
GTGGAAAAACCTTCAGCATATGGAAACTGAATGATCTTCGTGACCTGA
CAATGTGTGTCCTTGTTCTTATTTGGAGAAGTTCACAAAGCGCTCTGG
.GACGGAGCAGGGGACTGTCGTAGGGATCCTCAATGCCAACCCCATGAA

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GCCCAAGGATGGTTCAGAGGAGGTGTGTTTATCTATCGATCATCCTCAGA AGGTCTTAATTATGGGTGAAGCTCTTGACCTGGGAACCTGTAAAGCCAAG AAGAAGAATGGAGAGCCGTGCACGCAGACTGTGAATTTGCGTGACTGTGA GTACCT

>Sequence 206

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CTACGACAGTCCCCTGCTCCGTCTTCCAGAGCGCTTTGTGAACTTCTCCA
AATAAGAACAAGGACACACATTGTGTCAGGTCACGAAGATCATTCAGTTT
CCATATGCTGAAGGTTTTTCCACTATTCACACTCTGTGGCGTAACCTTCT
TCAATATAACCCCAAATGTCACCCAATCTATTTCTTCCAGCTTCTCTCTG
GCCATCTTTTCCTTGATCTGAGACAGTCTGATCAGTTTT

>Sequence 207

>Sequence 208

>Sequence 209

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TGATCAACTACCAAATTCTGTATGATACGTATCTCCACCGCGGCGGGGA
CGAGGTACACGACATAGGCACATGTGCAAACACAAAGAAGGTGGGCTGCT
GCTTCTTTCTATCTGCCCCTAGACCAGGCTCCTTTGCTTCACGTAAGATG
GAGACTGTCCCATTCCTCTGAAGTTGCTGGAAGGACATTTCCCAGGAAGA
AACAATTCCTCACTGCCTATAAACTGTAGTCACATGTGGGATAGTCAATA
GAACATGAGAATCAGAACAATCTGGGCAAATGGGTATGGCAAGAATGGGA
ACACCACAACAGGACAGATGCCAACTCTCATTCATGCCAGGCCTTTTGGC
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ATCTCTTTGACCCTGACCGGGCG

>Sequence 210

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> Page 79 (of 261 pages in Table 2)

TATGCTGAAGGTTTTTCCACTATTCACACTCTGTGGCGTAACCTTCTTCA ATATAACCCCAAATGTCACCCAATCTATTTCTTCCAGCTTCTCTCTGGCC ATCTTTTTCTTGATCTGAGACAGTCTGATCAGTTTT

>Sequence 211

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>Sequence 212

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>Sequence 213

TCTCCCTCGTACTCGATCATCAGAGTATACATATGAGTGTACTCTANTAC TACTACGATCTCTATACTAAAGTTATCCTATTCACTTTAGTGCCATCTGG ACATTACCATGGCGGTAGATTCGAAGCCCTATCCGCGGAGGCGGCCGTTT GAGAAGCCAGCGCTCACCCACCCGGGGTCTCTGTGCATTGACCTTTGGGT GCTGACTTGGAGAAAAGCACAAACACGACCAGTCCCCCCGCGTACCT

>Sequence 214

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CCTGGTTTCTAAGAATTGCCGTTGACTCTTTCTTTGGCTTCTGCTGGCAC GGTAACCAGACTCCCTACAACTGCACTCTTTGTCTTTGTCATGGAAGCCG CGAGCGTAGAGGTTCCGCGTGCTCTGCCGGACTTGAGCAGGTCACTGGGT CCTTTACACTTGTGAATTCGAAGCTTGCCAGATGTATCCTCAATGCATTG CCACTTCTGCCCCGGTTGTTCACAGGCTGTCTGGTACGAGATCTCCGACC AGTCTGGGGGCGCTGCGCGCAGCCACCTCAAGATCACAGATTCT GCTGGCCATATTCTCTACTCCAAAGAGGATGCAACCAAGGGGAAATTTGC CTTTACCACTGAAGATTATGACATGTTTGAAGTGTGTTTTGAGAGCAAGG

> Page 80 (of 261 pages in Table 2)

GAACAGGGCGGATACCTGACCAACTCGTGATCCTAGACATGAAGCATGGA GTGGAGGCGAAAAATTACGAAGAGATTGCAAAAGTTGAGAAGCTCAAACC ATTAGAGGTAGAGCTGCGACGCCTAGAAGACCTTTCAGAATCTATTGTTA ATGATCTTGCCTACATGAAGAAGAGAGAGAGAGATG

>Sequence 216

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CACGGTAACCAGACTCCCTACAACTGCACTCTTTGTCTTTGTCATGGAAG
CCGCGAGCGTAGAGGTTCCGCGGTGCTCTGCCGGACTGTGAGCAGGTCACT
GGGTCCTTTACACTTGTGAATTCGAAGCTTGCCAGATGTATCCTCAATGC
ATTGCCACTTCTGCCCCGGTTGTTCACAGGCTGTCTGGTACGAGATCTCC
GACCAGTCTGGGGGCGCTGGCGGCCTGCGCAGCCACCTCAAGATCACAGA
TTCTGCTGGCCATATTCTCTACTCCAAAGAGGATGCAACCAAGGGGAAAT
TTGCCTTTACCACTGAAGATTATGACATGTTTGAAGTGTTTTTGAGAGC
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GAGTGGAGGCGAAAAATTACGAA

>Sequence 217

G

>Sequence 218

GGGGNATATGTGCGCTCCCGCGGTGGCGGCCGAGGTACCATCCTGTTCCA
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CATGACAAGCTGGGCCAGCTTTCATAATGGTGTGGCTGCTGGCCTGAAGA
TAGCTCCTGCCTCCCAGATCGACTCAGCTTGGATTGTTTACAATAAGCCC
AAGCATGCTGAGTTGGCCAATGAGTATGCTGGCTTTCTCATGGCTCTGGG
TTTGAATGGGCACCTTACCAAGCTGGCGACTCTCAATATCCATGACTACT
TGACCAAGGGCCATGAAATGACAAGCATTGGACTGCTACTTGGTGTTTCT
GCTGCAAAACTAGGCACCATGGATATGTCTATTACTCGGCTTCTTAGCAT
TCACATTCCTGCTCTCTTACCCCCAACGTCCACAGAGCTGGATGTTCCTC
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TGGCCAATTTATCCTACAGGTCTTGGACGTGGGAAAAAAGAAAAACTCTACAG
CATATTTCCGAGGATCAAGGACAAGTCCAGAACGAGATCCTCTCATTCTT
CTGTCTCGGAAAAACCCAAAACTTGTTGATGCAGAATACACCAAAAAACCA
GGCCTGGAAATCTATGAAAGATACCTTAGGAAAGCCAGCTGCTAAGGATG
TCCATCTTGTGGATCACTGCAAATACAAGTATCTGTTTAATTTTCGAGGC
GTAGCTGCAAGTTTCCGGTTTAAACACCTCTTCCTGTGTGGCTCACTTGT
TTTCCATGTTGGTGATGAGGTGGCTAGAATTCTTCTATCCACAGCTGAAGC
CATGGGTTCACTATATCCCAATCAAAACAGATCTCTCCAATGTCCAAGAG

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CTGTTACAATTTGTAAAAGCAAATGATGATGTAGCTCAAGAGATTGCTGA **AAGGTGAAGCCAGTTTATTATGT** 

>Sequence 221

CATGCATCTCTCTNTGTCCATCACTATTTTGTAATATCGATATTATAATG TCGATAAGTATCTNTTTGTGTATGTATTTTATACTGTCTATCGATCTATC TGTTATTATNTAATAACNANANCAGANTTGTTGACCATTTTCTGAGGCNC GTCGCCCGGGCAGGTACAGCAACAAGAATCAGATGCTCTTTAGAGATCCT CCATITCATTACTCTAACATTCTTCAATGTGGTTCCAGCCACGCATAGTC ATATAGATACTACATATTCAAAGATAACTTACTGAAGCTTGTTCACAGAA CCAAGCTTTCTCCTGATAGCTCTTCTTCCCCTACCCCGCACTTTTGGAAG TATTACCCCAAATGCTCTTCAGGATTTAAATAACAATTTTTAAAAAGACA CTTAACACCACAAAATGGAATTTGCTGGCATGACGCGAACAATACGGTTA CTCCAGATGCTGTATTCAAACTGTATGGGTCCGTTGAAAAAATAGATATA ACCATTTTTCTCATAGACAGCATCTACTTTATCACCAATTCCTGGGAAGT CTTCTTCTATTAGTCTCGGATAGTCTTTATCCATAATATGGCTAGTATCA TCATATCTCCAGACCTGGTTTCCTGAGAACAGGAGAGTCTTGCCTGTATC CTCAAAGTGAACAGCTGCACTTATCTTCTTAACTTCTTTTGGAAGACCCA GTTCAGATATTTTTTTGGGATAACCTTCCAAAATGTCATAACCATT

>Sequence 222 TCATCACTCACATTCAGTATCCTCTCATTGTTAGTCTAATTACAATCGTT CTAATATCACACTCGTATTTCATAATATGTTATAACATGTTGACTTATGT TCTAGGAGATATCACTTATATTAATGCACTTAGTGGGGTTGATTCGAGTC ACACTCCGCGGAGGCGGCCGAGGTACGCGGGGAGTGTAACTATGGCCGGC CTGCGGAACGAAAGTGAACAGGAGCCGCTCTTAGGCGACACACCTGGAAG CAGAGAATGGGACATTTTAGAGACTGAAGAGCATTATAAGAGCCGATGGA GATCTATTAGGATTTTATATCTTACTATGTTTCTCAGCAGTGTAGGGTTT TCTGTAGTGATGATGTCCATATGGCCATATCTCCAAAAGATTGATCCGAC AGCTGATACAAGTTTTTTGGGCTGGGTTATTGCTTCATATAGTCTTGGCC AAATGGTAGCTTCACCTATATTTGGTTTATGGTCTAATTATAGACCAAGA AAAGAGCCTCTTATTGTCTCCATCTTGATTTCCGTGGCAGCCAACTGCCT CTATGCATATCTTCACATCCCAGCTTCTCATAATAAATACTACATGCTGG TTGCTCGTGGATTGTTGGGAATTGGAGCAGTTTTTCAGAACTTGTTTACA TTCCTTGGAGAAAAGTGTGACCTGGGATGTGATTAAACTGCAGATAAAC ATGGTTCCACACCCGGTTACTTAGCGCCTTC

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>Sequence 225

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ACGCAAATTCACAGTCTGCGTGCACGGCTCTCCATTCTTCTTCTTGGCTT
TACAGGTTCCCAGGTCAAGAGCTTCACCCATAATTAAGACCTTCTGAGGA
TGATCGATAGATAAACACACCTCCTCTGAACCATCCTTGGGCTTCATGGG
GTTGGCATTGAGGATCCCTACGACAGTCCCCTGCTCCGTCTTCCAGAGCG
CTTTGTGAACTTCTCCAAATAAGAACAAGGACACACATTGTGTCAGGTCA
CGAAGATCATTCAGTTTCCATATGCTGAAGGTTTTTCCACTATTCACACT
CTGTGGCGTAACCTTCTTCAATATAACCCCCAAA

>Sequence 226

>Sequence 227

TGGTTGTTTCCNNTANNATTTGAAGCGCTCACCGCGGTGGCGCCGCCCG GGCAGGTACGCAAAGTGATTCAGAGAACGCTGGGGCTCACAGGCGCTGTA GCAAACGTGCAACTCTTGAGGAACACTTAAGACGCCACCATTCAGAACAC AAAAAGCTACAGAAGGTCCAGGCTACTGAAAAGCATCAAGACCAAGCTGT TACTAGCTCTGCGCATCACAGAGGGGGGCATGGTGTTCCACATGGGAAAT TGTTAAAACAGAAATCAGAGGAGCCATCGGTGTCAATACCCTTCCTACAA ACTGCATTATTAAGAAGTTCAGGGAGTCTTGGGCACAGACCAAGCCAGGA GATGGATAAAATG

>Sequence 228

>Sequence 229

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>Sequence 230

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>Sequence 231

TCGTTGTGTCTTCGGTCTCTTTGTGTCTTCTTATCTTTTCGTTCCTTTTC
TGTGTTCCTCGTCTTTGTACTTTTTTTTTCTATTTCGTCTCACACTAGAAA
ANNNTTTATGCTTTTATCAACTCCCGGGGGGGGGCGGGCGAGGTACGACGT
TTCCATCAGCTTGTCTGTTTCATTCCCTGATGTTACGAGCAATATGACCA
TCTTCTGTATTCTGGAAACTGACAAGACGCGGCTTTTATCTTCACCT

>Sequence 232

>Sequence 233

TGTCCCCTCCGCTCCACACTTACAACTTCTACATTTCCGTCTCTCGTTC
TCTTGTTGTTTCGTCGTTGTATTTTCTTGGTTGCTCATTGTTGTTCCCA
TNAATNANNNCANTAGCGTTTTCGGCTCCCCGNGGNGGCGCCGCCCGG
GCAGGACGCGGGGGCCAGTTCTCTTCGGGGACTAACTGCAACGGAGAGAC
TCAAGATGATTCCCTTTTTACCCATGTTTTCTCTACTATTGCTGCTTATT
GTTAACCCTATAAACGCCAACAATCATTATGACAAGATCTTGGCTCATAG
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TTTTGGGCACCAAAAAGAAATACTTCAGCACTTGTAAGAACTGGTATAAA
AAGTCCATCTGTGGACAGAAAACGACTGTGTTATATGAATGTTGCCCTGG
TTATATGAGAATGGAAGGAATGAAAGGCTGCCCAGCAGTTTTGCCCATTG
ACCATGTTTATGGCACTCTGGGCATCGGGGGAGCCACCACAACGCAACGC
TATTCTGACGCCTCAAAACTGAGGGAAGGAATCGAGGGAAAGGGAATCCT
TACTTTCTGGACCGAGTATGAGGCTTGGG

>Sequence 234

>Sequence 235

TCTTTCATTTTCTTGTTATTCTCAATACATTCGTTGTATGTGTCGAGTTT CTCTTCTTCGTCTTGAGTTATGTTGTTATTGATCGACTGTGCGTGATC

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### Table 2

GCGAAACTAACCAGTGCTCCCTACACGCTGCTTTCGCGCTCCCATTCCTC
CCACTCTTAGCTCGTTGCATATCCGACGATACTCTTTGGCGGTTTTTGCT
TNCNCNTATTTTGTGGGACGCGTGGCCGAGCGGCGGCGCCCGGGCAGGT
ACCTACGCCACAGACAGCCAGAGGGAAAGCGACCCAGACAGCCCCTC
CTCGACAGGCCCACCCTGCAGCTCAGGCACCAAGAAAACAGCCGATACTG
GCAGCCATTGCAGCTCCAAACTGCAGAGGCAAGCCAATTTTAACTTTTC
AATTTACAGTCGATTTTGAAGAGCTTCTACATATCGGTTATGTAAATTCA
TATATGTATTTTTGGAATCAGTTCTTATAAACAGCTCGATTCAGTTTTAG
CTAAATTTATAGTCTAGGTAGTATTTTTCTACTGTAAAGAAATATCTTTCTA
TTAAAGATCTGTACCT

>Sequence 237

GCAGTTTTGTGATCTGCAATGATTCTTCCCTTCGAGGTCAGCCCATTATC
TTTAATCCTGACTTTTTTGTGGAGAAACTCCGACATGAGAAACCTGAGAT
TTTCACTGAGTTGGTGGTCAGCAATATCACAAGGCTCATCGATTTACCTG
GAACTGAGTTGGCTCAGCTGATGGGGGAAGTGGACCTTAAGTTGCCTGGC
GGGGCTGGCCCAGCATCAGGATTCTTCCGGTCTCTCATGTCTCTCAAGCG
AAAGGAAAAAGGAGTGATATTTGGGTCCCCACTGACGGAGGAAGGCATTG
CCCAGATATACCAACTGATTGAGTATCTACACAAAAACTTGCGAGTAGAG
GGTTTGTTTAGAGTACCT

>Sequence 238

GGCTATGATCAGCTCACCGCGGTGGCGGCCGAGGTACGCGGGGATTGTGT
GCAAAATCAGAGAGGGGTGCAAGATCCTGATTTTTCAGGAGTTCAAGCGA
CAATGGCAGCCCAATACGGGAGTATGAGCTTCAACCCCAGCACACCAGGG
GCCAGTTATGGGCCTGGAAGGCAAGAGCCCAGAAATTCCCAATTGAGAAT
TGTGTTAGTGGGTAAAACCGGAGCAGGAAAAAGTGCAACAGGAAACAGCA
TCCTTGGCCGGAAAGTGTTTCATTCTGGCACTGCAGCAAAATCCATTACC
AAGAAGTGTGAGAAACGCAGCAGCTCATGGAAGGAAACAGAACTTGTCGT
AGTTGACACACCAGGCATTTTCGACACAGAGGTGCCCAATGCTGAAACGT
CCAAGGAGATTATTCGCTGCATTCTTCTGACCTCCCCAGGGCCTTATGCT
CTGGCTTTGGTGGTTCCACTGGGCCGGTTCACTGAGGAAGAACCCAAGC
CCCAGAGAAGATCTTGAAATGTTTGAGAGAGGACTTGAAGTTTCT
>Sequence 239

>Sequence 240

TCATTTCATGAAATTTTATTCATATTATTTTTCATAAACTCCATAGTTCT
TTCTATGTCTACTAGTTTTTATATTATCTATTTCAACTTCTTATTTTCTT

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# Table 2

>Sequence 241

>Sequence 242

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>Sequence 243

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TTACAGGCACGAGCCAGTGCCCCAGCTGCCTCTGTTTCTTTATTAGCT
GTTCTGGACTGTGGGCTCCTTGGGCAGATGCTGTATTATGGGGATAAGC
CACACACTTTTTGAACTGGCCCGGTCAGGGGGGACATAACCATTTCCTGT
GCCACCCCATCAATCCCCACCTATTCTGAGTGTAGGCTCCTCCCCTGCTT
GAGTAATGCCCACAGATCTTGGCTCGGCACTCCTAAGCTGCATGTTGAAT
TCCTGGGACAACAAGACTGGCTTGTGGTTCCATTCTCCAGATCCTTGGGT
TGGCTTCTGGGTGCACTAGGAGATCTGAAATGCTCTCAGGCCACCAGGAA
AGTACTGGAAGTAAAGTCTGACTCTAAAGAAGATGAAAATCTAGTAATTA
ATGAAGTAATAAATTCTCCCAAAGGGAAAAAACGCAAGGTAGAACATCAG
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CAATACAGTACCACCACAGTTGCTATCTCTTGAACATCTTTCATTAAAAC
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>Sequence 245

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#### 1 able 2

GAACCCCCAATTTCCCACAAAAGAGGGAGATTTTTTGCCGGTAAACTTA
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GGGGCAGGGGAAAAAATTTTTTTTTGGCCCCCAGCCCCGGGGTCCN
>Sequence 246

>Sequence 248

>Sequence 249

>Sequence 250

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AAGGAGTGATATTTGGGTCCCCACTGACGGAGGAAGGCATTGCCCAGATA
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TAGAGTACCT

>Sequence 251

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ATTCTAGTATAATATATTTTTTGCTTCCGTTGTTATATTTATCACACA
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>Sequence 252

>Sequence 253

>Sequence 254

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GG

>Sequence 255

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GTAGTTGACACACCAGGCATTTTCGACACAAGAGTGCCCAATGCTGAAA
CGTCCAAGGAGATTATTCGCTGCATTCTTCTGACCTCCCAGGGCCTCATG
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>Sequence 256

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>Sequence 257

>Sequence 258

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>Sequence 261

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>Sequence 262

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>Sequence 263

>Sequence 264

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>Sequence 268

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TGCAAGTGGAAGACCTTCTGGCACTGCGACCACTAAAACTGTAACTCCAA
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AGCCATGGTCTTTTCTGAACCCAGAAGGTGTCAATGACAAAATATAATAC
TAGAATGATAACTGTGATGGCAGGCATCAACAGACCTTTCAGAATAGAAA
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>Sequence 269

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ACCTCGAGCGCCCCCGGGCAGGTACAGATGCACAGGAGGCCATAGGGT
TTAGGCAAAGGGAGCACAAAAGTTGAAGATGAGGCGCTGCCACCAATGC
TGGGACTTCAGGCCAGGGGCAGGAGCTGAGGAAGCCACAAGGGAGGACAT
TTTCTGCAGTTGCTGAACCAGTAGCAACCAGGTCCTGAGAAAGCCCTCTC
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>Sequence 270

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>Sequence 271

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>Sequence 272

>Sequence 273

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>Sequence 274

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CCACCAAGGCAGAATTCAAGCCCTCATCTGCCAAAACTACCACCAAAGAC
TTACAAACGGGAGCTTTCGCACCCCCCATTGTACGCGGGGGAGGAGCCTG
AGGAAGAGGGCGGCGACGGTGGTGGTGACTGAGCGGAGCCCGGTGACAGG
ATGTTGGTGTTGGTATTAGGAGATCTGCACATCCCACACCGGTGCAACAG
TTTGCCAGCTAAATTCANAAAACTCCTGGTGCCAGGAAAAATTCAGCACA
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>Sequence 275

>Sequence 276

>Sequence 277

AGGTACGCGGNGGAGCGGGCCCTACCGTGTGCGCAGAAAGTGGAGGCGCT

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# Table 2

>Sequence 278

>Sequence 279

>Sequence 280

>Sequence 281

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## Table 2

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>Sequence 285

>Sequence 284

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>Sequence 290

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>Sequence 291

>Sequence 293

>Sequence 294

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TTCTTTCCTTACACTCATTTTCCTGTCTTTATTATGATAGTCTAACTTTT
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TGTGATTTATCAGAGGCCTTTCCATATCTCAGCCACTATGCTATGACAGA
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CTGACTTACTTGTG
>Sequence 295

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TGAGATGACTACCGGGTGGCGGCCGGAAGAGCAACCGAGATGAAGGTGAA GATGCTGAGCCGGAATCCGGACAATTATGTCCGCGAAACCAAGTTGGACT TACAGAGAGTTCCAAGAAACTATGATCCTGCTTTACATCCTTTTTGAGGTC CCACGAGAATATATAAGAGCTTTAAATGCTACCAAACTGGAACGAGTATT TGCAAAACCATTCCTTGCTTCGCTGGATGGTCACCGTGATGGAGTCAATT GCTTGGCAAAGCATCCAGAGAAGCTGGCTACTGTCCTTTCTGGGGCGTGT GATGGTAGAGGTTAGAATTTGGAATCTAACTCAGCGGAATTGTATCCGAC TCT

>Sequence 296

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GGGGACCTGGAGGATGGACTTTTCCATGGTGGCCGGAGCAGCAGCTTACA
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GTGTGAAGTCCTCCAGAATAAGTTTGGCTGTATCTCTACCATGGTCTCTC
CAGTTCAGGAAGGCAACAGCAAATCTCTGCCAGTGTTAACAAAAATGCTG
ACTCCTATGAAAGAATTATGAGTGTGGAAAGATGAACTCACCACACACGC
TGATGAGGCTGTGGAGAATCCGTCCATGAAAGAATTTCTCCTGGGGGAAG
GGCTTACCTTGGCACTGCTAGAAT

>Sequence 297

>Sequence 298

>Sequence 299

>Sequence 300

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### 318 1 adie 2

GGTAGGGGAGGCGTGGTGATACATACTTTTAAACCAGCGATTGCACAG CAAACCACAATGCAAGTATTTCTGACTCCCAAGATTGCCGTTTCCTAAAG AGCAATTCTTCTGCAGGCAACAGCAAACCTACCTTTCCTTGCTAACTGCT TTCAGTAAATTCTTGATGGCCTTCGATTCTGGATTCAGACATCTCTTCTC ACCCTTCTTTTTCATTGTAGCAATGATCTCAACACGTGGACAAAATTGGC TTGCAGGAATAATTTCAAGTTTTTCTAAAAACCTTGGATTAACAGGTGGA TTACTTATTGCTATGCAGGGTACCTGGCCGGGGGGGCTGTTCGACACCTG GCTAATGGTCTTGACATGGAACCGGGCCTTAAATTTGGCATTTT

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AGTTGGTGGTCAGCAATATCACAAGGCTCATCGATTTACCTGGAACTGAG
TTGGCTCAGCTGATGGGGGAAGTGGACCTTAAGTTGCCTGGCGGGGCTGG
CCCAGCATCAGGATTCTTCCGGTCTCTCATGTCTCTCAAGCGAAAGGAAA
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TAGAGTACCT

>Sequence 302

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>Sequence 303

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>Sequence 304

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>Sequence 305

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GAGCTGAGTCTCATGGCCACCCTTAGCAGGAGTTGGGGAGGTATTTTTAA
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>Sequence 306

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TGTTGCGGCATTGCCCTGACTGCGGAGTGCATCTTCTTTGTATCTGACCA
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>Sequence 307

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TGTTAATGCTTTCTTTGTAATTAGGCTATATCTGGTATCTGTATAATATC
TTCAGTTCTTCTTTACCAGGGGTCTTACTCTGTTCTGAAACATGGCACCT

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# Table 2

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>Sequence 308

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GNNGAAGAACGGGCNNANCCCCAGAGAGAGCCAAAGNNACCCCGGCCGC
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>Sequence 309

>Sequence 310

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>Sequence 312

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GATGTGAGAATATCTGACATAATGGATGTATATGAAATGAAACTATCCAC
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TAGCCCTTGCACAGGCTGATAGACTGATTGCTCAGCATCGCTGTCAAAGA
ACTCAAGC

>Sequence 313

>Sequence 314

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# Table 2

>Sequence 315

>Sequence 316

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AGCTCGGCGAGCGAGAGGCGCGCGCGCGCGCTTGGAGAGCGACGCGCGCCC
CGCGTAAGCAGTGGTAACAACGCAGAGTAACGCGGGAATGAAGAATCTTA
GGCGGGTGCACCCAGTTTCCACCATGATTAAGGGTCTTTACGGAATAAAG
GATGATGTCTTCCTTAGTGTTCCTTGCATTTTGGGACAGAATCGAATCTC
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AGAGTGCAGATACACTTTGGGGGATCCAAAAGGAGCTGCAATTTTAAAGC
CTTCTGATG

>Sequence 317

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CCAGAAAAATGCCCTGGCAATCATCACACTTTTCCAACATCAATA
AAGTGTTTAACTCCTCATTTGAAAGATGGTGTTCCTGGATTGAATATTGA
AGAATTAATAGAGAAACTTCAGTCTGGAATGGTTTTTAAGGATCAGATTT
GTGATGTGAGAATATCTGACATAATGGATGTATATGAAATGAAACTATCC
ACATTAGCTTCCAAAGAAAGCAGGCTACAAGATCTTTTGGAAACAAAAAC
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GAACTCAAGCTGAAACAGA

>Sequence 318

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GATCTCAAAATCTGGACTTGAAAAGAATTCCTTGATCTATGAACTTTTCT
CTGTTATGGTTCATTCTGGGAGCGCTGCTGGTGGTCATTATTATGCATGT
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>Sequence 319

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GAAGGCCCCCTCCCAGGAAAAGTACCAGACATCAGCTGCCTCTTCTTCAT
TTTCAGCCAAAGAAAGGGCACGTTCAAATGAGGTCAGAGTCATATCATAC
TGCTGGGCATAGAAGCAACACAGCCCCAGATTGTTAAAAAGCTGGCCGTT
ATAAATGCCCATCTGCAGCAGCCGCCTGTAAAACCGGAGAGCTATTTCTG
GCTGATCAGAATAGAAGTGGTTGCTTCCAATGCATGCGAT
>Sequence 320

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### Table 2

GCGCTAGGGGCAACCCGCGGNGGCGGCTGCCAGGCGTNGAACGNGCACCN NCAGGAGACGCNCGNAGCCCNCGCGCCGTGCNCCGGGGCAGTTAGCCGAA GAAGCGGCNCACGCCNNCCAGAGCCACANCATCTGTGGNCGAAAGAGAAG CCCAGCGAGAGAGAGGNGNAGGAGGCCNGCAGGNACCN

>Sequence 321

>Sequence 322

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>Sequence 323

>Sequence 324

>Sequence 325

TTCGAGTCGGATTGAGCTCCCCGCGGTGGCGGCCGAGGTACCATCAAGTT
AAAAGCAGAAGATGCTTCTGGTAGAGAGCATTTAATCACTCTCAAGTTGA
AGGCAAAGTATCCTGCAGAATCACCAGATTATTTTTGTGGATTTTCCTGTT
CCATTTTGTGCCTCCTGGACACCTCAGGTAAATTCTCCTCAGAGCTCCTT
AATAAGCATTTATAGTCAGTTTTTGGCAGCACAATAGAATCACTAAAGGCAT
TCTGGGATGTTATGGATGAAAATCGATGAGAAGACCTGGGTACTTGCCCGG
GTCGTTTGTTTATATTTATCTTTCTGGTACTTACTCTTTTTATCCATTTT
TTAGGGCCTCCTAATTTCTCAGTATCCTGCATATTCGTTTTCCTCTATTT
TTTCTTTGTTTATCTTGCTCTCTCTCTCTCTCTCTACCCTATACACCTCTTTTAC
ATCTTACTTTATAACATCTTTCTATTCCTTTTCTTATATCTGTATGACTT
CTTCAATCATTCTCC

>Sequence 326

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>Sequence 327

CCGCGTCCGCCTCTAGTGTCACAGACACTCCTGGGTTTGGAATTTTGTTG
TTCTCTGTCTCTTTGATTTCCTGGAAGACGACACCATGACAATTTCAAAG
AAAATAGAACAAAATGAAGGAAAAAGAGGCTCTGTCTTAGCACATTCCTG
TGACCAGCCTGCTGTCTGTGGCGTGCCCTCCTGGCCCGGCCTTGGCACAT
GTTCGTTTTTTGTGGTTGTTGCCTGGACAGGCAACTCTGCAGGGCTGCTTC
TCTACGCATCCCTTTGCCTGCCTGCCTGCCAGGGGTTGTCAAGGGCTT
TTGGGTCAGAGTGGGCACCCCTTTCTCCAAGGCTCCCTGCAACAGCTGGC
CTGTCCCTGGTGGGGCTGACAGCTTTCTTCTTACCCTGCCAGGCTGGCCA
AGCCCCAGAGGTGACCTATGAGGCAGAAGAGGGCTTCTTTGGGGCCGTGGC
TACTCACTAGCTTGGATGGGCCCCTGTTGGAGCCCAGATCCTTGGTACCT
TCACTGGGTG

>Sequence 329

>Sequence 330

>Sequence 331

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## Table 2

GGGTTCCTGGTGAACTTAAACTTGTTACAGCAGCAGGTGATCAAACAGCC AAATTTTGGGACGTAAAAGCTGGTGAGCTGATTGGAACATGCAAAGGTCA TCAATGCAGCCTCAAGTCAGTTGCCTTTTCTAAGTTTGAGAAAGCTGTAT TCTGTACCTGCCCG

>Sequence 332

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GCAATGTAAGACACACACGTTAGTGTGGGGCACAAACGTGGAATATTAGG
AGAGAGCTGGTTCCAGCACCAAATCCAGAGTCACTCGGGGAAGGAGGTAT
GGTGGCAACACTTTATGCTTAATATTCAATTCTGCTCCAGTAGAACATGG
TACCT

>Sequence 333

>Sequence 334

GATGTGATCTCCCCGCGGTGGCGGCCGAGTTTGATTTCTTGCAGTCCTGA GCGATGGAGCCCGGGGTGCCTGGTTATTGTCCGCTTTCTCTCAGATG CTTGGCTTGTTTTTCAAGAGAACCTTTTTCGATATTCATTGCTCCATCGA TTGGATCCAGTCCTTGTTCAGAAAATTGTTTCAAGGCACTTAAGGCTGCC TGAAAGCCTTGAATCCTTGCTAAATATTCCAGTTGTTTTGAAGGTTGTAC CT

>Sequence 335

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TGCTAACAACTTTCAAATTCTTCTACTTACTCCTCTTCTTCAGCTTCAC
ATCTGGGAAAACTGATAGGGAAGCCTAGGTAGGCCTACCTTTGGTGCCAG
AGGGAAGCTCAATCCATGCAAGCCCCAGATAATATATGAGAACCTCCCCA
ACCTTACCCTACACCCCTCACCTCCCAATCCAAGCCAGTCTCCTTTCCCT
GCTTTCTCAAACCATGTTTGGACCTGCTTGGAAGCTCCCTCTGCTCCCC
TAGAAAGCTTCATTATGTGAGTGATACATCTTTTCATATCTTCTTGGTGG
TGTGTGTGTGTGGTATCATCAGCCTCAACATCTGAAGCAAATGTTGGGGGGG
GGTACCT

>Sequence 336

GATGACGAGCTCACCGCGGTGGCGGCCGCCCGGGCAGGTACTCATGAAGG
AGATGGCCCCTTTGGGAGCAACCAGAGAATCACTGAGATCCCAATGGAAA
CAGGAGGTTCAGCCAGAGGAACCGACTTTTAAGGGATCACAGAGCTCACA
CCAAAGACCAGGGGAACAGTCAGAAGCCTGGCTTGCTCCTCAGGCTCCCA
GGAACCTGCCTCAAAACACAGGTCTCCACGACCAGGAGACAGGTGCTGTG
GTCTGGACAGCTGGGCCCCAGGGACCAGCCATGCGTGACAACAGAGCTGT
ATCCCTCTGTCAGCAAGAATGGATGTGCCCAGGCCCTGCACAAAGGGCCC
TCTACAGGGGTGCCACCAGAGGAAGGACAGTCACGTCTCGCTGGCAACA
AGGTGTGCCCTGGGGCTATGAAGAGACCAAGACGCTCCTGGCTATTCTTA
GTAGTTCTCAATTTTATGGGAAACTCCAGACCTGTCAGCAGAACAGCCAG
AACTACAGGGCCATGGCGGAAGGACTCTGGAGAACAGCCAG

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### Table 2

>Sequence 339

>Sequence 340

CCGGGCAGGTACGCGGNGGAGCGGGCCCTACCGTGTGCGCAGAAAGAGGA GGCGCTTGCCTTCAGCTTGTGGGAAATCCCGAAGATGGCCAAAGACAACT CAACTGTTCGTTGCTTCCAGGGCCTGCTGATTTTTGGAAATGTGATTATT GGTTGTTGCGGCATTGCCTGATGGGAGTGTATCTTTTTTGTATCTGACCA ACACAGCCTCTTACCACTTGTTGGNGCCAACGACCACGATGACATCTAAT GGTCTAAGCAATGGAAGCCTTATTGAGGTCCACAAGGAAATTTTCTGGGC GATTTCATTCGGAGGTTATAGGTTAAGCCTTTTGAAGAGGCATTTTGGAT TAACACAATACTATAGAAGGGACCCTTGGGCGCTCTAAAAACATAAAGGG ATCCCCCCCCCCTGTTGGGAATATTTAAATTAAAGCCTTATTTGATGACC CGCCGAACCTCCAAAGGGGGGGGCCCGCGGACCCCACATTTTTGTTGCC TTTTTGTTGAGGGGGGTAATACCCCCCTCTTTCGGGAAAAATAAGGGAAA AATGGGTTTCTGTCTGGAAAAAATTTATCTCTTTTCCAATATTCACAAAA TTATAAACCCGCGGGATTAAAAAAATAAAAAACCGCGGGGGCCCAATAAGG GGGCGAACTTAACACTATATTTGGGGNGCGCCTAACCGCGCTTTTTTAAA AGGAGAGTTTGTCTATATAGGGGCTTTTTCTTCTTTTCTAATATAAGAAG GC

>Sequence 341

Page 103 (of 261 pages in Table 2)

## Table 2

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TTTGATGACTCACCGGGTGGCGGCCGAGGTACAGGTTTAGTCTGAATGCA
CTGTCATGAAATTTAAACTTTCATTATAATACTGTTTTAAGAACTTACAG
CATCTGCTTTACAAATGGTGTTAGCTACATGTCGACACAGCATCTTTAGC
CAGTTTTCTTTTGGAAGTTCATCTGATGTCATCTGGAAACTGAGTAGCAC
ATTTGCCTGCTCTGTTGGTGGCCTCACAAGCAAGGCAAAAGCATTATGGC
AATCTAGGGTTCCAGAATAACCATAAACATTAAGTGTCACTCCTTGGAAA
ATGACAGATGTATGCAAGTTTAGTTCCCTCAGAGCAATGAAATTCCAATG
AAATGAACTATCACTTCTCCACTTTCCTTGTCCTATTTTTAATAAGACAA
AGAACATCACCATATTAAGTTGAAGTACCTGCCCG

>Sequence 343

CCGGGCAGGTACATCAGAGATGCTCACACATTCTTTGAGTAGTTTAAAAA CTCATTTTAACCACTTTTTATTCTTTGTATTCAAACCAATCACTGGCAAT CACAGACTCACTTCTTCCGTAAATTAATGGAAGGAAATGAGTGTCTGAGT TCTTAGAATCTCAAAAGGCATGAGGATAAAGCTTTCCTGGAGATAATATA AGTGGTGGCAGGAAGATTTGGGAGCCAGATGATACTCTTTTCCTCTTAGA TGGCTTCTTTCTGTAGTAAACATGTGGGCCCTTTAAAATGTTGAACCAAA ATGTGCTTCAAATATAGTTTAGTTATAAAACATTTATGGGGGAGTATGTA TGTGCCAACTACAGAGGCTTCAGAGATGAAGAAACAGTTCTTACCCTAGT GTTGCTTAGAATCTAGTAGTAAGTAATAATTACTAACATATGCATTT ACTATATAGGCAATACTAGGGTAAATATTTTACATAGATTACCTTATTTA GTAGCTCTTAGCTGCTAAAAAAAAAAAAAAAAGATTAAGATGTCCAGTCTAG AGTCTCATAATTGTATGGTAAACACTAAAATGGTGGTATGGATCAGTTGC CATGGAAACACAGGGGCGGNGCCCTCAGCTCAGTTTAGGAAGGAGCAGAT CCCACAGCAGAGGAAGTACAACAGGCAGGCCT

>Sequence 344

>Sequence 345

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CAGTCTCTTATGCTGTGGCTCTTCTCAAGGATGTCTCAAGGGCTCCGGTG
GTGCTCTCCTGCTCTATCCGCTGCTGTGGCAAATCCTCTAAAAACAGCGT
TTTGCACAGCAGAGAGCAAAGTCCGCTTGTTATTCCACCCGATACGTGAG
CTCAGTTTGCCAGCTAGTGATCAAGTCCAGCTGTTGGCAAGTTGGTCCCT
GAGGCCTTGTAGACTGACCTGTGGCAGAGAGCTCCCTGGGTCCAGCATCT
GTTGCCCTCACCCTTGACACATGCGGACCCTCCCCAGGCT

>Sequence 346 \_\_\_\_\_

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## Table 2

G

>Sequence 347

>Sequence 348

>Sequence 349

>Sequence 350

>Sequence 351

>Sequence 352

TGATGAATCGACTCCACCGCGGTGGCGGCCGCCCGGGCAGGTTGGTAACA ACGCAGAGTCCCGGGAAGCAGTGGTAACAACGCAGAGTCCCGGGAAGCAG TGGTAACAACGCAGAGTCCCGGGAAGCAGTGGTAACAACGCAGAGTCCAG

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GGAAGCAGTGGTAACAACGCAGAGTACCCGGGGAAAAAAGGCAAATAGAA TGAGAACCATATTATGTACCT

>Sequence 353

GTAGAGAATGAGCTCCCCGCGGTGGCGGCCGAGGTACACCCAGCTTTGTC
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GGTCTCACAGCCTGATGGTCATTATCCCTGAATGGCATAAATCAACAGGC
TGTATGAGCATTGTGGAGATTCTACATGAGGGAGAGCATTTCAAACCCA
TGACAGATGAGAGAAGTTAGTACACTCTCACTGAACTGGGGATGTTTGAC
TTAAAATGATGGACAATAAGATAGTGAGCAGTAAGTGTGCTCTAGGCTAG
GCTACGAGAGGCCATGAGCTCCTCATCTCTCTCTGTTCTGAGCTCTCTG
ATCCACCGCACTTGGGGCAGGGGGTGCATTCTCTGTGCCTCCTCAGTC
TACTTTCTGCATCATTGGTTCTCCCAGCTCACTTCCATAATGTCCTCCTA
GGCTGCATTGGAATTGTGTGTTTGTCTAGACCCATGGCCAACACTGTCATT
GCCTGTGAGGGAGACCAAGCTTACCACCAAAGGCTTTTGCG

>Sequence 354

>Sequence 355
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CCAAAATGACGAACACAAAGGGAAGGAGGAGGCACCCGATATATGTTC
TCTAGGCCTTTTAGAAAACATGGAGTTGGTCCTTTGGCCACATATATGCG
AATCTATAAGAAAGGTGATAATGTAGACATCAAGGGAATGGGTACTCCAA
AGATTCAGGTTTACTCACGCCATCCAGCAGAGAATGGAAAGTCAAATTTC
CTGAATTGCTATGTGTCTGGGTTTCATCCATCCGACATTGAAGTTGACTT
ACTGAAGAATGGAGAGAGAATTGAAAAAGTGGAGCATTCAGACTTGTCTT
TCAGCAAGGACTGGTCTTTCTATCTCTTGTACCT

>Sequence 356

>Sequence 357

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GGTATGGTGGCAACACTTTATGCTTAATATTCAATTCTGCTCCAGTAGAA
CATGGTACCACCATTCTTCCAAGTTCAAAAAATTATCTTTGATTCATTTTG
TTCCCCATTCCTCTAATATGTCACCAATTCTGCTGATACATTCTTTGTAA
TCTCTCCATCTATTTTAATCTGTTATTCACCTGAGCTACACAAACATTCA

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TCTGCACAAGGAGTATTCCACGTGCTGAAAAGACAGAGGATTAAGCCCTC
CTTGTGGAGGCATTCACAGTCTGGTTTTAATACACAAACCAACAATTATA
ATACACAGGGATAAAAAAAAGTAGAGGCACTTATTGCATACCTGTACCT
>Sequence 358

>Sequence 359

>Sequence 360

>Sequence 361

GTCGACGTGCATTGAGCTCACCGCGGTGGCGGCCGAGGTACTTAAAACCA AATAAAAAGTGACATTTGAATTTCTTTTAAAAGGATTTCCGAGCTCACAG TCAGCTTGCGAGCCATTCTCCCGCGTACCAGCACAAACCGGGCCAGCCTC CTAAACTGCTCATTTACTGGGCGTCTACCCGGGAATCCGGGGTCCCTGAC CGA

>Sequence 362

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>Sequence 363
GCGATGAGAGTTGAGCTCCCCGCGGTGGCGGCCGAGGTACTTAAAACCAA
ATAAAAAGTGACATTTGAATTTCTTTTAAAAGGATTTCCGAGCTCACAGT
CAGCTTGCGAGCCATTCTCCCGCGTACCAGCACAAACCGGGCCAGCCTCC
TAAACTGCTCATTTACTGGGCGTCTACCCGGGAATCCGGGGTCCCTGACC
GA

>Sequence 364

>Sequence 365

>Sequence 366

TGTGACGTGAGTTGAGCTCCCCGCGGTGGCGCCGAGGTACTTTGCATCC
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ACAGATAGCTGCATCCGCAAAATAGAGAACCAAGAAATAGTCCCACACCA
AAGTCAGGATCAAATGATTCCTGGACAAGCCACCAAGTCAATTCAACTGA
GAGAAAGAAGCCTTTGCACCAGTTGGTGCTGGAAGTTCTGGATATGCACC
TGGATAAGTGAACCCCCCTCCGTCACCACACACACACACTTAATTTGAGAT
GGATTGCAAACATAAAAGCTAAAACCATTAACACTTCTTGAAGGTAACAT
AGAATATTTTGTAATGTTATGATAGGCAAAAGTCTCTTAGGACACACAAA
AAAATTAACCATAAAAGAAGAAAAATGGCTGGGTGCAGTGGCTCACACCTT
TAACACCAGCATGTTGGGAGGCTGATGCAGGAGCGTCCCTGAGCTCAAGA
GTTCAGCCCAGACTGGCAACATAT

>Sequence 367

>Sequence 368

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>Sequence 369

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CCGAAGGGGGCGTTACTGTTGCGACTGGCATCCGCATCCGCAGATGTAG
ATGGAACCAAAGCCAGAAGTTACGCGTCACCCTTGCTCTACAGCCAAACA
TGCAGGACTCTAGTAACCCGCGAAATGATGGGATAGCGTTGCAAATCCTT
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GCCTTTCAGCCTGAAGCCAGGAACAATTGTTCAAAGTTTCTTTGGAACAT
CAAGGAAGGAAATCCAGATTTTACTTTAAGTGCAATGGGGAGTCATTAAG
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>Sequence 370

>Sequence 372

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CGACGTCTACCACAAGTACAAGAGATAGAAAGACCAGTCCTTGCTGAAAG
ACAAGTCTGAATGCTCCACTTTTTCAATTCTCTCTCCATTCTTCAGTAAG
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GAGTACCT

>Sequence 373

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GTGGAGACCAGCAGAACTCCACCAGCCTGTGAAACCACGAACCCTTCAAT
CAAGAAAAGACCTTTGATCAGGAGAAGACTTCTCGTCTCATTTCTGGGGA
CACATTCAGGATTTCTCCAAAGCAGGTGAAGGTACCTGCCCG
>Sequence 374

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>Sequence 375

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TAGGAATCATTTTACTGGAAATGTTCTCAGGAATGAAACTGAAACATACA
GTCAGATCTCAGGAATGGAAGGCAAACAGTTCTGCTATTATTGATCACAT
ATTTGCCAGTAAAGCAGTGGTGAATGCCGCAATTCCAGCCTATCACCTAA
GAGACCTTATCAAAAGCATGCTTCATGATGATCCAAGCAGAAGAATTCCT
GCTGAAATGGCATTGTGCAGCCCATTCTTTAGCATTCCTTTTGCCCCTCA
TATTGAAGATCTGGTCATGCTTCCCACTCCAGTGCTAAGACTGCTGAATG
TGCTGGATGATGATTATCTTGAGAATGAAGAGGAATATGAAGATTGTTGT
AGAAGATGTAAAAGAGGGAGTGTCAAAAATATGGACCAGGGGTATCTCTA
CTTGGTCCAAAGGAAAATCCTGGCAGAGGAACAGTCTTTGTTGAGTATGC
AAAGGCTGGGGATTCAAAGTTGCGCAGAA

>Sequence 376

10

>Sequence 706 GGTACGAGTAAATTTTCATTACCTTTAATTAGGCAATGTTTCTTAGATAA CCATAAAACTGCAAAAGCAATTTTTAAAAATGATAAATAGGACTTCATCA AAAAGTAAACGCTTCAAAAGATACTACTGAGAAAGTCACAGAATAGGAGA AAAATCTGATGAGACTTTATGTCTAGAGTAATGAATTCTTGTTAACGAAT AACCAACCCCCTTTTAAAAATGGGCAAAAGATTTGAATAAACATTTCACT ACAGACAATAAACAAATGGCCTTAAGCACAAGAGATGCTCAACATCAGTA ATTATTAGGGAAATGCCAATCAAAACTACAACGAGATACCCTATATCCAC TAGTATGGCTATAATAAAAAAGAGTAACAAACGTTGAGGAGGATATGGAG AAACTCGAGCCCTGGTCAGGTGTGGTGGATCACACCTGTAATTCCAACAC TTTGGGAAGCTGAGGCAGGCAGACTACTTCACTGAACCCAGGAGTTCAAG AGTAACCTGGGCAACACCGCGAAACCCCATTTCTACAAAAAATTCAAAAA TTAATCACGCTTGGTGGTGGTGCCCGCCTATAATCCAACTTCTTAGGAGG CTAAGATGGGAGGATTGGTTGAACCCAGGCAGGTGGAGGGTGGAGTGAAC CAAGAAAAACCGGTGGACCTTTACCCGGGTGACCGAGTGGGACCCTACT TCAAACAAAACCGAACTACTGGGGCCCTATAAAACTGGCCGTTTCTTAAA

Page 110 (of 261 pages in Table 2)

CATAATTTACCCTTGGT

>Sequence 707

>Sequence 708

>Sequence 709

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>Sequence 710

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>Sequence 711

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TGATTAGGACTTCATTCATGTATCTTTTGCTACATAAACCTTTGTTAGAT
TAAATGGAAGACACCTGCTAGGTGATACTTTTTATAAAACATATGAGTAA
GTCATATATCTTTGTTAAATTTCTGTATGTTCTTTTTTTGTATAAAGATGG
AGAGAAAGGATGGAGTGATACTAAGGACCCTAATAACATCTCTGTTCAAA

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TTAATTACTAAGTGATAGAAGTATTCATATGCCATTAAAGATTTGCCAAT TCTATTTG

>Sequence 713

>Sequence 714

CCCTTAGCGGCCGCCCGGGCAGGTACATATGCACTATTTAGAATATGACA
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GAGTATAAATTTAAATGAAAAACCCAGACCACAGAACAAAAACAGAAATA
CCAAAAAATAATCACAAAATATTAAAAACAGTATATAAAACACAGTGACAG
AATTAGGACTAAACATATCTGTAAAAACAATAAATGTAAGGGTAATCTCAC
CAATTATGAAAAAGACCTTCAGATCATATTTTAAAAACAAATTTAAAAACT
CAAC

>Sequence 715

>Sequence 716

>Sequence 717

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>Sequence 719

ACTINNNTTTTATTTTTTTTTTTTTTTTTGGAGACAGGGTCTCGCTCTATCA CCTAGACTGGAGTGCCTGGTGCAATCTCGGCTCACTGCAACCTTCACACC CCAGGCTCAAGTGTCAATCCTCCCGCCTGAGTAGCTGGAACCACACGTGC GCACCACTAAACCCAGCTGTTTAATACACCATTTTTAACCCAAAACATTA AGAAAAATATAGGAACAGTAAGTAGATTACATTTTGTAAACAGACAAGCT TACAAGTTTTCTCAAATATGAAAGTCATACTAAACTGGGAGACTGTTAAC TTCTTGATGGGGTTAATCTCTAATATGAAGCCACAGTCATAGCTAACTAC AAATTACATATACAATGCCAAAAATATTCAAAAATAACATTTTTTGCACC TTAATGATTACAAATGCTAACCAGCATAAAGACACTGGAAAGTTTCAGAA TCTCCTCATCACATACTTTCAAATATCTTCCCTTTACTTTCAATGAAATT GTACGCGGGATTCTATGGTAATGATGACTTGCCAATGTTCCAGGTGGTTT CTTAGCTAAAACTAGAGAATGCCCCTAACTTAGATGGTTTTTTGAAGGCT ATTACAATATGGTATTTGGTTTGAACCCCCTTTAAAGCTTTTTTACCAAT CTTTGTTTTACACCCCCTTTTCGGGGGGCCCCCCCCCGGGAAAAAACCC CCCACAACCGCCCGCC

>Sequence 720

>Sequence 721

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TGGGGCAACCCTGGGGGGGGGGGGGCCTTTTTTTGGAAAACTTTGGGGG ATATATTCTTTTTTTCCCCCCCCCTTTTATAAAAAAAA

>Sequence 722

CCCTTAGCGTTTTCGCGGCCGAGGTACATGAACCTATTAATAAACCATTC ATGCTTCCCAGTTTGGCAGATGTGAGCAAACTATGTATAGGAATTCCAAA GGTAACTTTTCCTTTCATTACTTTACAGAAATACTGTCAAGTCCAATAG AGAGCACAGACTTGGGAGGCGGATTGGGTGGGTTTGAATCTCTGCTCTGC CACTITTATTAATCATGTGAGTTGAGTATGTGACTTAATCTCTTTTAGCT CAATTTCCCCATCTGTAAAATAGGAATAATAAAAATACTGACTTCAGAGA GGTTTGTGAGGATCAATTAGACAGTCATGTTAAGTCTGTAAATTGTTTCT GTAATGGGCAAGATAGCAAATATTTTAGATTTTGTGGACCATGCAGTCTT TATCATAACTGCTTAACTGCCATTATAGTGAGAAAGCAGCCACAGACAAT ATGTAAATGAAAAGTGTGTCTCTGTTCCAATAAAACTTTATTTTCAAAA ACCAGCTGGCTTGTCACATCTGGCCTATGGGCCATAGTTTGCCCATCTCT AATGTAAAGAAAGGACTTTAGCCCAAAGCCACAACTTGCATAGTAATGCC TTAAAAAATGTTAACATCTTTACTGTTATTAATATTACTACTGCATCTAT TACAGTAGCAATTGAGTAATGAATACATGAATGTTATAATGGTAAATTAC TAACCTTTTAAAAATATTAAGCATTGGCATATTTTAATACTTTAAATCTT TTAGGAAGATAGTTACCCTGCAT

>Sequence 723

>Sequence 724

>Sequence 725

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>Sequence 726

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ATGTTCTGTGCTTAATCCAATACATCATTTAAATTCTTTTCACATTTGGA
CAACAGAAAAACTGAAATCTATGGATTCCAAGCTGCAAAGTATTTTATCT
AAATNGCAAATCAAAAAACATCTATAACATCTTGTTGGGGATACAAAGTT
CTCCTGGCTGATTCTCATGCTACAGAAAGCCCGAGTTTCTGTTCTGTAAA
TTGTGACAAGTGCCCGCGTACCTTGGCCGGGAACACGCTAAGGG
>Sequence 727

ACATTCTATTGTTATCTCTATTTTTTGGATGAAAAAACAGCAGCACAAAG AAGTTCAGTAACTGGCCTAAGGCCACACAGCTTGTCTTCCTGAAGACTGG ACCCAAACCCAGGCAGTCATAGAACATGCTGGTCGCTATTGGGCCGCTTG CTCTATGGGGGACGGTGCTCCAGGAACACAGCAATGCGGTTTAGGATTCC AGGACCTGGGCAGCTGCTTCTTTCTTAGTTCTCGACAGACCACTGA GTGCAGTTTTTCTAAATCTTTTCCCCACTTTGATATGTGGTCCATAAAAC TGCTTCCACACGTATAACCCACTGTGAAGTTTAAAATGATTTCATGTTTG GGCAAATTCCTACTGAATGTTAAGCTAGATAGGAAACAAGTTCTGACTAA CACAAATGAAGGTCTGAATGAAGAAGTCTTACTTTTATAAAGGAATTTTC CCCTCCTCACCAAATCCAAGTTTAAATGTTGATATCTCTGTTGCAAAAGG ATGATAAATAAATGGGTCCCTTGGTTAGTAGTGGGTGTATGGGTGTGGGT AATAAGGTATTGAATGTACATTTAATACTCCTTCTCATTCTATACTGGAT CTATCTTGGAAATGATGCATTTTTCATGTTTAACATCACTTCCTAATCCG ATATTTTTGTCTCTTAACTATTATAATATTCTTGCGTTATATAAATTATA TATTACTCTAATCGCTTGCTTCTTTCACTCTACTATTTTATCATCAACAT **ACTATTCCGGTCTTCTGCTCTTACAACATGTAATTATTTCTCTACTGCTC** GCTACACGACTGAACTTAACCAATATATCACTGTCTAGAAACTTCCAGCT **TATCA** 

>Sequence 728

GGTACTTTNTTTTTTTTTTTTTTTTTTTTTTTTGGTAGAGACGGGACCTCACT GTGTTGCCCAGACTGGTCACAAACTTTTGGGCTCAAGCAATACTCCTGCC TTGGCCTCCCAAACTGCTGGGATTACAGGGATAAGCCACTGTATAGAGTA TGAAAAGTATTTAAAAGAATCTTCCAAAGGAGGACAGCAGAAATGAAAAT AAAGTAAGTTCAAACTAGAATCCTTGACACAACTGGTTTTATTCCCAATG CCTCTTAAAAAGAATCGTTCCATGGGTGGCAGGAGGGGTGTTTTCATGGT GTGATGCACCGTGACTTGTTATTCAAGATGTAGTCCAGTGTTCCATCTAT CACGTTTTATACCTTTCGAAAAAAAAAAAAAAACCGAAACCACAACCACAA CAAAAATTATTCCAATTAATGGGATTCACAGCAACCTGGATGGGACTGGA GACTATATTCTAAGGGAAGTAACTTAAGAATGGAAAACCAAACATATGTT CTCGCTCCTTAGTGCGAGCACTTATGAAGATTCCAAAGGCCTAAAAATTG AAAGATAAAAAACATCCTAACTTGGGTTCACGGTACCCTGCCCGGGCCGC CCGTTCTAAAGGGGAAATTTCAGACAACTTTGGCGGCGCGTACTTATGGA ACCCCAGCTTGGTACCACAGCTGTGGTGTAATCATGAGCATAACCTGTTT CTCTGGTAGAAATATTAATCCGTCTACAATTCTCCACAAAATTTCAGATC >Sequence 729

G

>Sequence 730

Page 115 (of 261 pages in Table 2)

ACTCACTTAAATAAATAATTGGTAAGATGATTTTATCTGACAATTAAAAA AAGGTATATGTGAAAAACCTTAAAAAAAATCTATTTCATTACATGTTGAA ATGTTCTGTGCTTAATCCAATACATCATTTAAATTCTTTTCACATTTGGA CAACAGAAAACTGAAATCTATGGATTCCAAGCTGCAAAGTATTTTATCT **AAATTGCAAATCAAAAAACATCTATAACATCTTGTTGGGGATACAAAGTT** CTCCTGGCTGATTCTCATGCTACAGAAAGCCCGAGTTTCTGTTCTGTAAA TTGGGACAAGTGCCCGCGTACC

>Sequence 731

ACTTTTCTGAAGAATACATCTTCGTTCAATGTGGTCGTATTCTTAATTTT TTCTATAATATTGCTTGTAATCTTTAGAGTTATGGTTTCATTTTTTGACT ATTAAATTTGAAATTGTTGACATCAGCAGTTGACTCTTCTGTGTAGATCA TAATTTTTTAATTAAGAAGACACTCTCAAGTGTTGAACTATAATTGTAGA GTAAATTCTAAGTGGAGGATATCGTAAATTCTTTTTTTGTCTTGGTATTGA CATGTAAATGTTAACATATGTGAATAATTCAGTCCACGATTGTCACAGGT TCTATGTCTTTACCTCCTTTCAAAATACTTTCTTTAACAAATACTTTGAC AAATTTATTAACATTTATAAGACAAGACTTACCAAGTTGTGTTCGTTTAT GATTCTTTAAATGTTTTCCAATACTTAGATACATCAAAATTATAGGACTT CTCAATTCCATCCTATTGTTACAGAATAATAAATTAATCAGAATAGGAAG ACCCTTAAAAGATCTTTCTCATGAGTTCAGATTTCCCAGATAATAATTAC AGAAATTTCATTTGTACCTTGGCCGCGACCACGCTA

>Sequence 732

GGTACTTTTTTTTTTTTTTTTTTTTTTGAGATGGAGTCTCGCTGT GTTGCCCAGGCCGGAGTGCAGTGGCACAATCTCGGTCACTGCAAACTCGG CCTCCTGGGTTCATGCCATTCTGCCTCAGCCTCCCAAGTAGCTGGGACTA TAGTAGATACGGGGTTTCACCATGTTAGCCAGGATGGTCTTGATCTCCTG ACCTCGTGATCTGCCTGCCTCGGCCTCCCAAAGTGCTGGGATTACAGGCG TTTACTCTATGGACTCACCCTGAATTCTTTCCTGCTCAAGATCCAAGAAC CCTTTTTTGAGGTCTGGATCGGGACCCCTTTCCTGTAACACGACTGTATC CCCTTGGCAGACATATGAATCTGCACCCCCGCTTGGTCTCCAATATCCAG GGATGAACAAGGGAGGAAACCAGGGAAAATGCTTACTGAGGCATCTTTTA TGAGCAGTCACCATGCTAGGCTCTTTACTAACATTGCTTTTTTGCACTGTT CACAACAAGTCCTGGATATCTTCAATTAGAAATGTGAAAACTGAATTCCC GATGAAAAGCCCCCACTGCTTTTGACTGGCGTGGCTTATATCGGGCTTTT GACCAAGATGGACTGAATGCCATCTTGTGTCAGAGGGACTTAGACATTTG **AGGGAAGTT** 

>Sequence 733

GGTACAAAACTATGTGAGAACGTATACTACTTCTCGGCCACAACTACTAT TTTTAGATATTCATAAAATAACCTCTGATTGTGTTTTCACATTGACCCAT TCAGTTCTGTCCAATCTTATAATTCTGATTAAATGTTCTGGGCCTCAAAA CTAATTTTTAAAAGGCCACTAACTCCAAATCTAGGAACAAAACACTCTGT ATAAAACTATGATTTATGTAGCTCATAAGAGGGTGAATTTTGAATATTTA CTCTATGAAAAAGCCTAAGCAATTCAATAAAAACTTGATAACTGCACGTT **TAGTTTGCAGCATCTTGT** 

>Sequence 734

CCTTTCGTGTGGACGCCCTTTCAGGTACTTTCTCTGAATTTCATTAGCTA CATTAAAAAAAGAAAGATCAAATGCAATAGATAGCACTGTAATAGATTT TGCTACATTAAAAAAAATCCATTTGAATACACAGTGAACTAAAACACCAG AGTGGCTAAAAAGTCCCTTCATGCATATTTACTTAGCAGAGAGCTCTTGA GAAAGACCCAACCAATAAACCCCAACCAAAGCAAATCCAGCTACTTCTCT AGCTGAGAGGGTGGAATGACTCCAAAATATTGTTTCAAGCTCAAAAAGCC TAAAACAACTCCACATAAAANAACAAAAATCTATCTAATTGGACATTTAC **GTACC** 

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>Sequence 735

ACTTTTTTTTTTTTTTTTTTTTCACAGACACAGGCTGGGAATTTCC CAAATCTTACAAGTTCTCGTCCCCTTTCCCTTAACAACTCTTTCGGAGTA TCTCCGTCCTTTCACACTTTATTGTAAGCGAGGAGAGCAGCCAGGCTGCA CCTTTAACATTTCATTCACAGGATCTCAGCTCAGCCAAGTCCTCAGCCAT TTTGTAATGAGGATCACTTTCTTCCGGTTCCCCGTGACCTGTCCCTCGCC TCCTCTAAGCCTCAGCAGAAAGGCCTTCAACATCCACTTTTCCACAACAT TCTGTCTATGATACCTGCATTCTCTGAGATGCTAGAAGCTTTCTCTCCAG CTCTCCCCTTTCCTCTGAGCCTTCACCCGAGTCCCCATTGATGTCCGT ATTTTTACCAACAAGCTCTTCACCGCTATGGAGGCTTTCTCCAGCAGGTC CCTGAAAACGTCTGCAGCATGTACGCGGGGAAGCTCTGTTTGGTGCTTTG GATCCATTTCCATCGGGCCTTACAGCCCGTCGGTAGACTCCAGCAGCCAA GAATGGTGAAACACTAACGAGAGACAGATTGGTTTTTAAGAAACCCTTGG ACGCCTTGCAGGGATAAACCTGGAGTTAGTTGACTTTTCACCCCCGGGGG TGGGGCCTCGGAAAAGAACAAGCCCTTTTTTCATTTCCCTTCTTGAAAA GATTTCCAACGGGATTTTCTCTGAATAAATGTGGATGACTGCCCGGATGT TGCTTCAAAGGGGAAAAA

>Sequence 736

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>Sequence 737

**GGTTTCTCAGTAACAGTGATGCATTAAGAAATTCTTGTCTGCTAAACTTC** ATAGCAAACCGATCCCAGTCCTCACCTCATTGTGTGGTAGCCCAGCAGCA GAGAAGATAGGAATTTTCTGCCCCCTAGCAATACTGTTCATCCCATCGAT GGCCGAAATGCCAGTCTGAATCATTTCCTCTGGGTAGATTCCACATTGAG GGTTGATTGGCTGACCTAATGTATTTCCAAAAAGGAAAATTTCAACAAGT TGCCGCATTATTCATGAATGAAATTAGATATCATATCAAATTAAAAGAAA AGAAAAAGCACCAGAAGACCAGAACTACATAAAGCATCTCTTTACTACAA AAAAAATCAGTTATTTTTCAAATATGAAACTTGAAATAATTGTTTCCTTT ACTCTTTTGGAGACTCACAAAACATTGGGTAATAGAATTCAAGTTCCCTA AGTGAAGATAAAGATATAGCAAATATGAAAGAAAGCCTAATTTCAAATTC ATGGTGTTACCATATACATTTCAGAAATATTCCAGATATTTTACACGATC TTAAGATATTAATACCTAAAATTTTACGATAATTTCTAAGAAAATCTTAT TTAAGTATAAAATAATTTATTACCTATGGGACGTGTGGCCTATTAACTTT AAGGGAATCACAAAAAACACTTTTTATTTGGCAAAGGACCTTGCCCGGGG **GGCCGTTAAAAAGGGCG** 

>Sequence 738

GGTACTATCTGCTCTGAATTAAAATTTAGAACAAAAATCACCTGCCGTGC
CACTACACATGGACATAATCAACTGCTAAATTATGATTTGTTTTCTTCCA
GTTACTTTTCCAATTATTTTTACATATACAAATATTTTCTTGGTAGAAGA
ACAAAAGTGGCACTATTCATTGTGTAGTTTTTTTTGTAACTTATATTTTAC
CCTAAGCATTTTCTCGTTGTCTTAAATTATTAATTGAAAATTATTCATGG
CTAAATAATGCCTAGGCTGCCATGAGTCTTTTCTCCTTCTATAAACCGTG
TCAGCATTCTTTTATATATATCTTTCAGCACATCTGCAATGATTTCTTTG
GAATAAATTTCTAAAGTTCGCTGGATCGAAAAGATTCAGGGATTTTTAGT
GTTCTTTCAATTTGGCAAAGTATTTTTCAGAAACAAGCCCATTTCAGTTC
TGAATAAACAAATTCTTTTTTTATGTTGCATTTAAAATCTACCTCCTTGTA
GCATATGCAGGGAAAATGAATTATTTGGTCAACATGCTTTCAAATACCTT
TATTTTCCCATGATTTACATTGGAAGGTGGTGATTCAAGCTCAATGCATT

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AATTGCTTCTCCGAGGTTTTTAATAATAGATGAAGTGGTTAGCTTCTAAA TAAAGGATATTGTAGGTGGAATGTATAATATGGCCTAAGCCCGACAACTT CCCTTGGTTTGT

>Sequence 739

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>Sequence 740

>Sequence 741

>Sequence 742

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>Sequence 743

ACTCCTCCTTGGCAGCATCAATCAGGCAGGGCTCAGCCCACACCCGGCTC
CTAAAGACAAGAGCAGAAAGCAGAATGGTGTTTAGAGACCATCGCA
GTGACCTGATCCTGAAAGCACCTGTAGGAAATTGGCCTCCGCCAAGTGAA
TGTGACAATGCAGTCAGCCACAGTGACGGAGTGCAAGATCGGATCACCAC
ACAGATCCAAGAGACCGCTCACCACACCTGAGAAACAAGAACCCAAGACA
GCCTCATGGAGGTGGAACCGTGCTACGCAGTTATGGCTTCACTACTGAAT
GCGATCTTGCANAAGT

>Sequence 744

>Sequence 745

>Sequence 746

GGTACTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTAGTTAAAATGCTTTACCTCAATGG
TTGAGATATTTTGAATGGATTTTTCAAGGGGGGGGAAATGCTTATTATAAT
AATAAACCAAAATACTTAACAGAAAATTGTCAGCTATTCTGACAAAAATA
AACATTTTGAGAGACTTTATTTCTTTTGTCCGTTTCTGTGGTATCACTCA
TTGTCGTTAAGTAAGTAAAGCTTTTTATATTTAGGTAAGAACTGATTTTA
TTTTTTAAATTATTTTATATTTATTTAGCACAGAAGAATAATGAGAGCC
ACATTTTAGTTCAACTT

>Sequence 747

>Sequence 748

>Sequence 749

ACCACTCACTACATTACAAAATAGTCTCTAACATAAAATTGCCTTAATAA CTATACTATTATAGAATCTGATAAACCTTACATTATTAAATTGATTATAA AATCTTCTTGGAAAAACTTTGGTATGTATCTTCAGAAGGTTTTTTAAAAA

Page 119 (of 261 pages in Table 2)

TAATATTTTAAGGGCCTGTAAACATTCCATTCTATTAAAGCACAGCAGAA TAAGTAATGGATATTCAACTGCATACAGAATATAGAATCAAAAAAACAAT TTATTATGTATTTGTAGAAAATCATTACCAGAGTAAGCAAAAAA

>Sequence 750

>Sequence 751

>Sequence 752

>Sequence 753

>Sequence 754

>Sequence 755

GGTACATGTTGGAAGGGTTTTTAAAATGTTTTGAAACTGTGCACAGGCCA AACCCAACTTCAGGACATGGGTTTTCAACTTCTGGATGGTATGATGGGG TGATAGTAGGGTATAAAAGTATCCTGAGAAGTTGAAAGCAGTGTGTGAAT GGGGTGTTCTTTTCCCCACAATCCTTTCCCATCTGCTGACAGTAGACT TAGCACCTCACAGATGCTTGGGCCTGGAAATGAAGCCATGAAAATGAAGC CCTCAGCCTTCTTGGAGATCAGAGCCATGGTCCTCACCCACAGCACATGG

>Sequence 756

GGTACACAAATATTAAATAGGATATTTATTTCTAAGCCAAATTTCAGAA AACAATTTACAAACTTTTTTTAAAGTATAAACATAGTGTATGCTTACTAT AAAAGGAAAAGTATAAAACATTACTCAAGTATATATAGAAAATGAGTGGG CTGCTGATCCCCCTCTATATTATCTATTGCTGTGTGACAGTATTACCACA

Page 120 (of 261 pages in Table 2)

AATACAGTAGCTGAAACAACACTTTGTTTTCTCACAGTTTCTGTGGGTG AGGAGTTCAAGCATAGCTTGGTCCTCTGCAAGCTTACAATCCAAGGGTTG G

>Sequence 757

GGTACTTCTTTTTTTTTTTTTTTTTTTAAATGAGTAGGAAGAGATGGTA
TCACAAACACAAAGCACAGGTTACTGTCTTTAAAAAATTTGCGTTCTTCTA
TTCTCCAATGGAAGTGGGAACAAAGAGAAAACCCCTGTGTGTCCTAGCAC
AATATGGGCATTTGTGTGGATTTAATAAATGGGCATTTGGATTGTTGGGA
AAATGTGATCAATCAGCAGGCTATAGAAACACAGTTTGATACGATGGTGA
AAACTTGTCTACAATGATGTTTTTTTCAGAAATGTTGGTGTGATTAGAACA
AGTCAGCAATGATGATGACAAAATATTTACATAATGTTATAGATGTGGCT
TGCTAATGGAAATACCTATCTGAGGCTGTTTTAGGAATACACAAA
>Sequence 758

>Sequence 759

ACTCCGATTGCCTCTCCCATGCTTCTCTGCTTTCCAAAGAAAAAACTGAC CTTGTATAGATCCTGTCAGCTGATTGCAGTGCTCTTAACTTCTCCATTGT GAGTTGTTCAGTCTGAGGAGTTAGGTATAAACCCAGAGTGGTATTCTCTT TTCTGTTGTGTTTGGTTTTGCTTACATATTCAGGAGCTGCTCTTTACCCC CAGAACATCCGTATATATGTTTTTTTCTGTTTCTAGATTTAAAAATATTC CAGAAGCCTGGCCTCAAGATAGATAATATTTTACTTTTA

>Sequence 760

>Sequence 761

>Sequence 763

GGTACGCCTAAGGGAGAGCTGGGAACTCATCAAAGAGACAAAAAAGATGCT
TTTTTTGCTCTGAAGGCATCGCTGTGGTGGCTTTGGTGCGCAAGTAAATATA
GTTTGGGGGCCCCCGATTGCCATGGACTTTGGCTTTTCTGGTGGGAACAA
ATGGCCATCAGGTGGACCCAACCTTGCACACATCCCAAAGACCTGGCACT
CATCTTGGTATGAAGGGAGGTTAAAAATAAAAGTGGTTGAACATCCTCTT
GGATGTGTTTAGGCCAACCTTGGTTACAAGACCCCTGGAATATTGTGTTT
TAAAAGGGGGGTAGGTTGGGAATCCAAAAACCCTTGGGGGACAAAATAAG
TTTCATTCCGTAACTTGTTGAGAAATTTCAAATTTTATTGGTTCCCCCAA

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>Sequence 764

CCCTTACCGGCCGCCCGGGCAGGTACGCGGGATTCATTTGAGTGGGAATC
TCAAAGCAGTGGAGTAGGCAAAAAAAAAGAACCTCTTCATTAAGGATTAAA
ATGTATAGGCCAGCACGTGTAACTTCGACTTTAAAAAATTCTGAATCCCA
TATTGTAGGTATGGTTTCAATTGGTCGTCGGCAGGGGGTAAGTGAATCCT
TGGGCAGGTCAACCATAGCCTTCTAACTTTGTTTTAACTTTTTTAAGCCT
TTTTGATCCAAAAAAAATCTTTAACTTTTTATAAGGGAGCCAAGTTTTTTC
AAACTTCCCTTAAAATGGTTTGAAATTATTAATTAGGTCCCAGGTTAAAA
ATTTCCACCCAAGGCCTTCCACCAGGGGAAATACCCAGGGAACCTTTTTG
AAAGTGGGAAAAAAAAATTTGGAAATTCTTCTTGGAATTAACCTTAAAAA
ACCAATTTCAAAAAAGGAAATTTCAAAAAATT

>Sequence 765

GGTACAGAAGCAATGTTTTTTGAAAGTTTTCTATCTGAGGATTGTTGAAT
CCACAGATGCAGAACTCATGGAAACAGTGCCCACTGTATGTCACAATTTC
AGAAAATCAGTATTTCATACAATCAGCTAATAGCCTAATTTGTTGAGCAC
AGAAAATACACTGAACCAATTCTGATTATTGCAGAGAAAATGATTGGCAG
GATATTGGGAAATAGAATGAAGGGCGGAAAGAATTTCACATGGATTCAGT
ATACTCTCCGTCAGGAATTTTTGTTCCCTTGATCTTTTTTGTGTTTATTGC
CTTATTTATTGGGGCCCTCTCATAATAGGTGGGTTTTCATCCTAT
>Sequence 766

GGTACAGAAGCAATGTTTTTTGAAAGTTTTCTATCTGTGGTTTGTTGAAT CCACAGATGCAGAACTCATGGAAACAGTGCCCACTGTATGTCACAATTTC AGAAAATCAGTATTTCATACAATCAGCTAATAGCCTAATTTGTTGAGCAC AGAAAAATACACTGAACCAATTCTGATTATTGCAGAGAAATGATTGGCAG GATATTGGGAAATGAAGGGCGGAAAGAATTTCACATGGATTCAGT ATACTCTCCGTCAGGAATTTTGTTCCCTTGATCTTTTTTGTGTTTATGCCT TATTTATTGGGCCCTCTCATAGTTGGGGTTTTCATCTATCGGTACTCCTT TTCCTGTCCT

>Sequence 767

>Sequence 768

Seguence 760

ACTTATTTTTTACTAAGGTTTTGTTTTGGAGACTTGTTTGAAATAAAGT GATCCTCATTCAGGATTTAGAAACAAAAGTTATACTCCACATGCTAGGGA TTAGGAAGGCTAATGTGAACTGATCAAAAGTATGAATTATGGAATGCCTT TAGAATAATCAACTTTTAGGTAATTTGATACTGCTATAATTTCAAGCTTA GAGAAAAGTTGTAAGAATGGCATAAGGAACTCCTATATATCCTTTATCTA

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GATTCACTAAATGTTCATTTTGTGCCATTTGTGTTATTCTTTGTCTCATC CTAGCCCAGTCAGCCTAACACCACCAGGGATAAACCAGTAGTCTGATAA >Sequence 770

CTCCCCTACTGTCTTTTCATTTATGTCAAGGCAGGGGAAGACCTCAAAGG GCTCTTGCATCCCAGTCTCACTTCCCAGAGAGGCACGAGGCCCTCCAGGA TGTGGGGACAGGAACTTTGGGGCAAGCCGGGGCTGTCCAGAAGATCACCA GGAGGGCTAAATAGTAGAAAGGAGAGTCTTATTGGTGATATGTTTGCAAA CTGGGAAAAGATAGCCTCCAGTGTGGAGCAAAGATGCTCCTTCTTCAAAG AGGGCAAGGGCAGCTTGGATTTTGTGCCTTACAGGGTCGGTATTATATAA GAGGGGAGCCAACTACATGGGCAATGGATAAACATACATGTAACACATCC CATGTTCACTTANGGGCAGGATTTTAGCATTAAAATGAGGTGGAATTTGG CTCTTTACATCAAAAAGTGAGCTATCAGACACAAAGGCGGTTTGTGCACA AGCTCTCCAAAGGACTNGAGGGCTACAACTGCTCATTTTGAAAGAAANTC TGTAAGACCAGCCTTGTCAACCAGATTAGGAGGCATCTGACAATTGCCTG ATAACTGTACCTCGGCGGGACACGCTA

>Sequence 771

GGTACAAATAAAGTATTCCAAGGGTGCAGAATNGAAAAGGAAGGCAAACA ACTTGTTGACATTTGGGAAATTGGGATATCCTTTGGGGAAATGTAGTAAT TTGAATTTGGAATATGTTGTCCATTCTTCCCTGTAACTAATGCTATCAAG ATAAAGTTAGAAATACCACATTTCAGAAACAGCTGGAAGTAGACAGGGTC TTTAAGTTATTACTTCTGGGAATTCTAAACAAATGAAACACACCAGTGAA **TCTTTTTTTGACCTTGGCTGC** 

>Sequence 772

CTTGTTCCTTTGCCTACAAGAACATGTTTTCTGTTCCGCAAAGGAGAATA AGAAAAACAATGACCCCCTTCCATTCCCATAACCCAAAACTAAAACTTCC AGGGAGTTGAATTAGAAATCCACCCTGTGGGGCATTTTTTTCCCCCCAAA ACCCACCCCATTACTCTTGTAAGAATTCTGGATTAAGGCGGCTTCTTTAA AGAAAGCCCTACCAGGCTTCTTTCCCCCAATTACCCCTTATTCTGGAAAA AGCCAAGGGAAACCCCACTTGCTTTTTGGGTCCCAGGGAAAAACCAGGGC CATTTACAAAACCATTCCAGGAATGTTGGATTTTATTAAAAATGGGGCGC >Sequence 773

GGTACTATCATCCCCCAAGGCCTTTTACAGTCTGAAATATCAAAATTGAA AGCAAAAATAGGATGACCAAAGGAACTACTATTTTACCTTCTTTTCAGGA ACTTCTACAAATAGTTAGAATACTAAAATTTCCCTTTATGGGAATCTTCA AGGGGGGGAATATAAATTGTGCCCATGTTTGGAAAGGGGGCATACAGATG TTTCATTAACTTGAAACAAGGTAAGGCCAGTGTCTTCCCTTTAAAAACCA TAGGTCGTGTTTAGGCAACCCCAGGCCACCCAATGGAACTAAGGGGCCAT GGCCTTTTTAAAAAACAAAAATTTTTTCTTATGGGAACCTTTAACCGCCC TTTCTTATGGGGGCCCCTGAATTTATGTTATAAATTGGCTTTAATTGAAG

>Sequence 774

ATGGTATATAAACAAATAC<del>AATA</del>TATACAATAAAACACCTAAACGTCAGA **GGGCTGCATGTTATTCCACAATAGGTAATAACCAAATAGTATTTAATGAA** TAGGGCAGAACACACAAAAGGCACCAACAAAAGCCAAAAGCATAAAAA GGCATCGGCCAAGTAAATGGTTTGTGGGAATGGCAGTAATTCAAGGATTT TGGTCCATTATTAGAACATTAAAATTCCCAGGTAGGACCACTTGCTAATT AAGATTTTTTTGGGTATTTTTTAAACCTTGGAGGACCAAAAAATTTGGGG

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>Sequence 775

>Sequence 776

>Sequence 777

GGTACTGCAAGCCAAATGCAATGAACAAACCAAGGTTATTGATAATTTTA
CATCACAGCTCAAGGCTACTGAAGAAAAGCTCTTGGATCTTGATGACTT
CGGAAAGCCAGTTTCCGAAGGTAAATCGGAAATGAAAGAACTTTAGACA
GCCAGCTTGAGGCAGCTTGAGAAACAGAATTAAACATTTTAGAGAATTGA
AAAAAGAATGGCTGAAAGTAAGCAAGGGCTTAGTAGCCATTTAACCAAGA
AGAGGCTTCCAAGGGGGAGAAGAAGCTTAAAGGCTTTACTAAACCTTTTA
AGGAAAAAATTTTGAAGTGAAAGTCCAGTTCAAAAGTGAAAAGTAGAACT
TTTGGGAAAAAAAAGAACCTTTCAAGAATTTTTGGAAAAAGAAAAAAAGTTT

>Sequence 778
GGTACTGGTTATCAGGATAATACTAGCTTCACAGAAGAAGCTGGGAAGTA
TTCCCTCCTCTTCTATTTTTTTTGGAGGACTATGTGAAGAACTGGTATTAA
TAAAAACTCCTTATTAAGGAAATTTTTTTAACATACCAAAAAATAGTAAGA
ATAGTATCATGAGTTCCTGTGTGTATTCCCGCCTAACTTCAATAATTATC
AATAGTCCACCATTCTTATTTTACTTATACTTCCCCTCCCCAACACCTTA
CTCTTTTGGCGGGGGCTGAAATTATTTTAAAGTAAATCCCAAACATATCA
TTCACCTTTAAATACTTCAATGTATATCTCTAACAGATAAAGACTTTTTT
TA

>Sequence 779

>Semience 780

>Sequence 781

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>Sequence 782

>Sequence 783

>Sequence 784

ACTACTCGATTGTCAACGTCAAGGAGTCGCAGGTCGCCTGGTTCTAGGAA TAATGGGGGAAGTATGTAGGAGTTGAAGATTAGTCCGCCGTATTCGGTGT ACCCCTGGGAGGTGCCAGTCATTGAATAGATAAGGCTGTGCCTACAGGAC TTCTCTTTAGTCAGGGCATGCTTTATTAGTGAGGAGAAAACAATTCCTTA GAAGTCTTAAATATATTGTACC

>Sequence 785

GGTACAAGAGGATATGTGTGCATTACATGCAACCACTACACCATTTAATA
TCTGGGGTGTGAGTATCCGTGGGTTTTGGGTATCCGTGGGGTCCTGGAA
CCAATTTCTCCTGGATACTGAGGGATGACTGGATTACTGTGTTTTGTGT
GCTTGTTTTTAAGCTTCAAAAGATTATGTGATCTAGGAGTTGTTAGATTT
TATTATTGGTCTTAAAAGATAAGCTTAGATGTGTTACTTTTTTTGGAGTTT
TAGTTTACAGTGATTCATGAATCGGGCAGCTTCAGACCACAGGAGACATG
AAGCAGGTAGAAGTTTAAGAAAGCTTGACAAGCAAAATATTTGATTTGGT
TAGAG

>Sequence 786

>Sequence 787

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>Sequence 788

GGTACCTGCAGGCCTCCTACACCTACCTCTCTCTGGGCTTCTATTTCGAC
CGCGATGATGTGGCTCTGGAAGGCGGGAGCCACTTTCTTCCGTGAACTGG
CCGAGGAGTAATCGCGAGGGCTACGAAGCGTTTTCCTGAAGATGCATAAA
CCAGTCGTGTGCGGACCGCGCTTCTCTTTCCAGGAACATTCAAGGATAGC
CAAGCTGGATAGATGAAGTGGGGGTTAAAAACCTCCAGGACGGCCTATGA
AAAAGCTTGCCCATTGGGCCCCTGGTAGGAAAAAAAGCCTGAAACCCAGG
GCCCCTTTTTGGGAATCTTTCATTGCCCCCTTGGGTTTTCTTGGCCCTGC
AACGGGACCCCCCCAATCTTTCTTGTGGACCTTTCCTTGGGAAGACTTCA

>Sequence 789

ACTITAATTTCTTTATAATTTGTTCAGCTATTTAAAAAGATAATCCACAA TCTCCTACCGCCATTAGAGCACAGGAAAAAAAAATTCAAAAATAAAGGAA AAACATGGCTCATATATCTACAGAAGTCACAAAAATACTATAGGGCACAT ATACCCAGGCCTCAGCGGTGGGAAGAAAACATACAACCACCGGGCAAAAT GTTTGAACACTGAAGACGGGAATTTTTTTAGGGCCATNTCAAGACCATGTT GAAGGTAACTGGGAAAGTCCTGGATAGAAATAGATTAAATN

>Sequence 790

CCCTTAGCGTGGTCTCTGCCGAGGTACTCAAGTCGCCCTTATGGAGCCCT TGATTCAGGCTTCAATAGTGTGGACAGTGGTGATAAGAGATGGTAGGGAA TGAAGTAAGTGTTTTTTATGTTCCGTGTGTTATAACACCTGATTAAGAGA AAACAGAATGATGAAAATGAAAAGCGTCTTAACTGGATTCAGTTTCTCAC TACATAAAATACAGAAAAGTCAAGGTGGAGGCAAGATTCCCACCCTCTCC AGCAGAATTGGCATTCTGCGTCCTTACCGGCTTTCTGTCACGTGGATTTC CGCCTGTTTCCTCATTGCCTCATGGAAATAGTTTCATATCATAGAAAGGC AAACAGGAGCTGAGCCAGTTGAAACTGAAGCCTACAATCTGAGGTGGGGG GTAATCTCGAGCAGAGGTGCTAGATGGTGAGAAAACAAGTANGACTTTCG GCTGATGGGTAGAAACAAGGACCTTAATAAAGAGTATTCATGTGCTCAAG AAGAATAACTTCCTGGCTAATTCTTGTCGTTGTCTCGTTTTTAAATTATT GGATATATGTTGTCTGCTCTTAAAATTACTGTGTTCACAGAAGTCTACAA AAAAAAAAAAAAAAAAGTACCTGCCCGGGCGCCCGTTTAAAGGGCGA TTTCCACACACTGGGGGCCGTACTTATGGATCCAGCTTCGTACCCAACTT GGGGTAATATTGTCTAACTGTTGCTGTGGGAAATTGTTTCCCCTCCAATT CCCCCACATT

>Sequence 791

GGTACTAATTCTTTTCCTCTTTCCTAGACCGATTCTAGTTTGTTGCCTTC
CCTTTCCTCGGAAACCCCAAGTTTGGGATGCTGCAGACACTCTGTGCCCC
CCTGCATGCTGGGTGCCTGGCCAGCTGCCAGGGCATAAAGACAGAGACGA
TGTGGCCTTTGTCCTTAAGAATGAGGTTTGAAAGCCTCAGTTCTTCCATG
TTAGGTGATTTCTTGCAGCTCTTGGTATCTGCAGAATTAGTGTGAATGCT
TAAAAAATATTAACAGCTTTATATCATCAAAGTTTTAACAGT
>Sequence 792

>Sequence 793

ACCATGCAGGGATAGCTGAGTCTTCATCCTCCTCAGCCCCTATCTGTTCA GTGCACTGAACACCAGCTGCTCTCTTCCTCTCTGGCTCCCATGGCAGCCA TGGTCTGTTGCAGAGAGAGAGAGATTGCCTGTTCCCTCTTTAAGGGAACC TCCGTTTTGCTTTCTGGAACCACTCTCTTAATGC

>Sequence 794

ACGAACTTAAATTTATGATGAATATCTTTGATAATGAGAAATCCTGAGAG

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ATTITACTITCAATTITATTITAATTIGAAAGAGCATATGACATCTGGAA TATTITTAACATATAGCCATACTGTTTATTITAAATTIGTAATAATAGAAA TAGAGTAATTCTACTGTTGGATTITAATTITTAATCATATTAAAGTITAA CTGGATTITATTITAGGACTAAAATATITAGGACTAAATAAAATTITATT AATTAATTTAGGACTITTGGGAAAAGATATTTCAGAAGTTCAGTGCATAT CAAAAAAGCGAACAACAGAGGCTTCATCTTTTGAAAACTTCATTGGCTAA AAGTGT

>Sequence 795

>Sequence 796

GGTACACTATCTGACCTAATCCTCAACACAAACTAAGGCAGAGACACAG GGCTGCAAGGACATTTGCTGCCATCCAATTTGTGCCAGCCTGTTTTATCA ATCTGAACCTATATTATTTTTAAGACCTCACGGCATCACTGAAAGATGAG TATTATTAGTTGGAATTTTAGGGATGAGAAAACTGACCCTCAGGGAGAAT AACTGACTTGCCCCGGCTCCAACAGTAAGTGGCCCTGCTGGGATTTGAAC CCAGGTGTGTCTGACCCCGAAGCCTGATCTGACCTCTGACAGTCGTGATA AAAATAAT

>Sequence 797

>Sequence 798

>Sequence 799

>Sequence 800

Page 127 (of 261 pages in Table 2)

TGGATGGTAATGCTGCAACTTGGCACAGATATATTCAGTAGCTTCCCAGG AATACAAATCTCATGTATTAACTCAATGTGGCAAGCTATCTCAGATTTGA AGCCTAAATACTTAAATTTTTACTTTAGAATGAGTACCCTGCCGGGGCCC GTTCGAAAGGCGAATTTCCACAAACTGGCGGCCGGTACTAGGGGATCCAA GCTCGGACCAAACCTGGGGGAATAAGGGCATAACTGGTTCCTGGGGAAAA TGGGTTCCGTTACAATTCACAACACATTCCAACCGGAGCCTAAAGGTAAA CCCGGGGTGCCAAAG

>Sequence 801

GGTACTGATTATTCTCCTGCTTAGGGAGAAGCGGAAGAAGGCCCTTGGAA CTGTGAGTTTTGCATTCCAACTTGCTAATTCAACATAGATCCTAATTCCT TAAATGCTTGTAATTAGAAATTCTCGTGAACTGTATTGGTTTTTGTCAAG CAATCTGTTTGGGGAACTTGAGCAACTGGGGCACTGCTGGCTAGGGTGAA GTTTATTTAATTTGTTTTTATGACATTCTTCATCTTGGAAATGGGGTTTT CAAATATTGCTTTCCCAGGCATCATTACTTATTTGCTGGTTTTTATTTCA AGATTGGGACTAGCTCAAGGTGCCAGGGAAGCGGTTTGTGGTGCTTTATA TTAAAGTCGTAATATCCAAAAAAATTGTCTGATTGTATGGGGTATCTTGG ATGTGGTACCTGGCCGGGCGGTCCGTTCAAAAGGG

>Sequence 802

CCCTTTGAGCGGCGCCCGGGCAGGTACGATAGGCATGCAATTAAAGAAGA CCTGCCTCAAACATTTTCTGTGTGACCTGAGGCAAGTCCTTTTATAGCTA TAAACTAGGGACAATATTTGCTGTCATTTTTTCTACAAATGTCACAAAGA ACAAA

>Sequence 803

ACGCGGGGGTTCAGCTGTCTCTTACTTTTAACCAGTGAAATTGACCTGC CCGTGAAGAGGCGGGCATGACACAGCAAGACGAGAAGACCCTATGGAGCT TTAATTTATTAA

>Sequence 804

GGTACCTTGCACAGTGCCTTTTAAATTCATTTTGCTGGACAGTTGGCAGG CTCTTTCACTTGAGAGGCTATATCTTAACGATTTAGAATGGAGAGTTTGG CTCAAGCTCCCTGTGTGTGTGTTGTTCTTATACTTTTATTCTTGGTA TTCCAGAGTCTGGAGGCTTCTCTTTTTAAAAATTGCTAGGCTCCTGCCAA ATGTTATAATTTGGGGATGTGAGTTCACTAAGAAATCAACTGACAAGAGG CAGATTAATAGGAGAAATGACATCGAAATTTATTAGCATGCAGGGGAAA AAATTGATTACCAAATATCCCAGTAGGGTAGAGATGCTTATATACCCCAC CTCTTAAGAGAGGGAAGTGGATGATTTTAGGGGAATAGTAAATACTTT NTATGGGAACTCACTGGGCTTGAAGAATATAACAAAAGCCTGGGACAAAG TCTGTTGGGCCCACAGAACAGACAGTGGTTTATGACAAAAGTCTTGTGAG ATGTTATGACAGACTTTCAGCTTTCTTCTTTGTATATGATTCAGTTAATG AAAACTAGGGAAGGGACTAGAGGTAAATGGTTTTTTTCTTTGATGGGGCC CAACCTTAAACCGGATAAGAGGACCTTAGAGAACAAAACCTTATTCTGGG CTTTGGGAGAAACAGAGGATCCAAGACAAAAGACGAAAGTTGGATTCAGA GAGACCCTGGGCTGCTCAATTCAACATGTCAAAGGGCATATTTTTGGGTT **TGGGATTTTAAT** 

>Sequence 805

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>Sequence 806

>Sequence 807

>Sequence 808

GGTACTATCCCCTACCTATAAGGCATTTATAATGTGCTGGGCATTGTGAC **ACTTTTCATATATTATCTCATGAAATCCTCACNAATAATTCTGAAGGGTA** GCTGGTATTTTTATCTCCACTTTACAATTCTGAGGCTTACAGAAGTTAAT TCAGTGGCCCAGGGTCACACAGTTTACAAGTGCCACATTGGTGAATATAA AGTAGCAACTTCTAAGTTTCACTCTCCCACTTCCCTAGTTATTTTCCTAA GGCATGAATGTCTGGGAAATAGCATGCATCAGATNTTCCACCTCTTTAAA ACTCTTCAGTTCATATAATNTAGGGTGTGACTATTCATAGATACCTTTGA GCTAATCTTCTGGGAGCCAATGTAACCGCAATGCACACTGCAAAACAATG CACGCTTTCTCTGTAAATTAAAAATGCCAACCGAGCTTGGGAAAAGCCCA CCACTGTTCCTGTTTTTTTTACACACACAATAGGTAACTCTGCTCTAT CTTCTACAAAGAGTCCCAGTCAGTTTTCTATGCCTACCCTCTTAAAAGTT TCATTACACAAGCCAAAACAAATTCCTCCAAAAAAGGATAATGAATCCTA TTAATGAAAAGTGGTATTITCTCTAATCATTNTTAATAAAAGGAATGGGG GATCAAATGGCATTAAAGCTCATTTTTGAAACAGAATTAAAAATAAAATT GCAAATATTGTAAAAAAAATTGACAGATCACAGCCCCCTGTTGTAAGGCT **ATTCCCATTAAAGAATG** 

>Sequence 809

ACTITITECTITICITITITITITITITITITGGAAGAATATIGCATACCTAT
TAGAAAAGTCTITTAACAATTAAAATTGAAAATGACTGACAAACTTACAC
TATTTGATTTAAATAAATAAATAAATGGTCACATGATAACAATCTCCTGA
TTGATATGCTTTATTTAACCAGGTTCTCAAACCATTGGATGTGAAAACCA
AATTTTACAATGCAGAGGTAAGTGTTGAGTGTTTAATGGGATTTCATATT
AAACATTAAGATCGTATTTGACTAAAAAATCTCTTATATACATTTCTAATA
CTGAAGCAAATCGCCAACGTGACTGTAAATTATTTGAAAAAAATCACAAAT
TTCAGTTAAAATTGAATAATTTTATTATAGGTCTCATAATCTTTTTCAGC
TTACATGGAATCAATGTGTCTTGATTTTTATTCTCGTTAATTTTATAAGG
CCTTCATCTCCTTTCGGTAAATGATTGCCCTCTCATTCCATTTAATGGTG
GTTGTTACACTAGCAATCTGTGGAATTTTACATGTGGTTCGGGATTTTAC
AAAAATTGGAATTAGTAGATCTAACGCTTGCAAAAAAAATTAAATATCACA
TGGAAAAAATACTGACAGNTGAACTTTACACATTAAATTTTTTCCAGGTAG

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TAGGTTGGCAGCCAGAATAGGTGCTGAGTTTGGTGAATGGTTTTAAAAGC TCTTGGGAAAACAAATTTGGCAAAGGGGAAGTACTCATTATTGAAGTTCT TTTTTTTTTACCTTAAAAAAAGGATAAATGAACTTGCCAAATAAAAAAA

A >Sequence 810

CCCTTAGCGGCCGCCCGGGCAGGTACTCCATTTCTTTTTATTCATATTAT
TTCACCAAATAATATTCCACTGTGTAGATCTATCACATTTCGTTTAGCAG
TTTATCAGCTGGTGGACAATTTGGCTGTTTCCATTTTTTTGGCTGTTATGA
ATAATGCTGCTATGAGTCATAGAAACCATTCCTCTTACTCAAGAAACAGG
TTCTCCAGAAACTAAGCTAAACTTGTTTGAAATGTAAATTCTCAGGTATT
CTCAGTATAGACCTATAGATTCACTTAGCTGGTGGGGTCCACCCAACTTC
TTTTAACAAGTCCTCCAGTGGATTCTGATGCAATGCTAACATTTGTGAAC
ACTGTCAAAATCAAAATGGAGTCACTTGTGTTTAAAAAATCCTGACAAATA
AAGCCAGGGACAGCTATGAAGAGAGGGTTCTCATGCATCAATGCCTGATT
AACANAAACTATCCCAAATGACTCTGCANAAACCACAATCCTGCACAAAG
GTCATCACAAACCTTACACAAAAAATATCTTCACAAGGACATCTGTCCAGC
AATTGCCTGTCCAATCTCAGACTGGTCACACTTGTTACTGATCCTTGTN
>Sequence 811

GGTACAATCATTAAAACTATGTTGTAATACTGTTTGTCTTTGTATCCATT CTGGCGTGTCTCCATACACTTCACTAATATTTGATATACCTGTTTTATAC CAATATAATGCTGCTGCTGTACGTAGAAGCTGTAGTCACCATATCCTCTA TTTGTTCAATTATTTTTTCATCTTCTGGCACACTAGGATCTATAACAATG ACAATATCTTCAAAGCCATTATTATTC

>Sequence 812

>Sequence 813

CCCTTGAGCGCCCCCGGGCAGGTACATGTGCATAAGAGGGAATGCTTC
CCTACATTACTCCAGAATACAAAGCTTCTTTCTGCCTTTCTCATCCACAT
AATGGAAGACACTTCTTGGGTGAAATACTCCACAGTTATTTCAGTTCTCA
CTGGTGAGTCTGAATATAAGCTCTATGAGAGCAGGGACCTTGTCAGTCTT
ATTCACAATATCCCCAGCCTCTAGAACAAGGCTGGCACATAGTAGATGCA
CAAAAGGTGTTTGCTGAATGAATGATGAGTCTGTGTGTGGGGTAATG
ATAGGGCTAAGGATGGGACTCTAAACTCAGGTTTCCTCTGTGGGTTTCAC
AGTTTACTGGTCTTAAGAGGAGAGTTTCCTAAACTTGCCTTATGATAAAA
ACCACCTTCAGCATTTGGTAAAAAATTACCCATTCCTGTAGATTCTGAGTC
AGTGAGCTGAAGTGGAGCTGATGAATCTGTTTTTTTGTGATACTGCTGCTG
CTGCGGTTTTTAACACATGCTTCAGGTGGTTCTAAGCTTAGGAAACCTTG
CCCAAGGATACCATCCTGTCTCTTTGGGAAACTGTCTCTAT

>Sequence 814

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>Sequence 815

>Sequence 816

GGTACAACTGTAATAGCTATTGGTCTTCAAGTGGGTTTAGATTTGGTGAC ATCAGTTTGATATTCTCTTAAAGGAAATAAATATTCAAGAACTGATTATG TTCTAACATGATTATATTCATGGTGTTACATAGGCCTCAATTTTTTCACA GAAAGATTTTTGGAACAGGACTGTGAAGTGAGGCTTTTTAAAAAAATTATT TTATAAGCAGAGAACACAGCCTGATAACTTAGTCAAGGATATACTGTCTG TCTCACTACTTTGGACTTATATGGCTTCAGATTAAGTCATCCAAGAAACA TACATA

>Sequence 817

GGTACATGTAATAGACACTATGCTACAGCAAAAGCTTTTCTTATTGTCTT
TAAAATTTTCCTGGGTGCATAAAACTATGTNGGTAACTCTTTCCCAATTT
TTAACTTTTACATTACAAGTCATTTTCAGAGTAAAAAGTCATTTAACAAA
GGCAGATAGAAAGGCCTCAAATCCCTGAGGACCAAAAATCCCAACACATT
TTCAAAAAGGGAGAAAATTTCTTTAAACTTCATGGGAAAAGTATTTTTAAC
ATAATAGAGAGGCTTTATGCAGT

>Sequence 81

>Sequence 819

>Sequence 820

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CTTAACAG

>Sequence 821

GGTACTGGAAACCAGACCTTACTTAAGCCCACCAAAGGCAAGGTTTGGGC CTGCCACAGCGGATTTCAAAAAGACAAAGCAATGCAAGCCACGTGTTCAA AATGCCCTAAGTGGCTATTCAGGTAATATATAAAAGTAAGACCAGGCTAA TTAGTATACAATGGGGTAAACCAGAGAGCAGAAAGCCCTTCTTTAAAATG AGCCTACCACTGCTTGGCCTCAGTGTGAATTTAGACCCCATCTTCTGATA TTTCAGGAGAAAGTAAAAATCTAGATTTTTATCTAAAATCTTTTTAATTT TTAAACAGTCACCTGATTTT

>Sequence 822

>Sequence 823

CCCTTAGCGGCCGCCCGGGCAGGTACCAAGACTTTAGAGGGCAAAGAACA GAGGATTCTTGAGAAAGGGGACTTGAAGGTGAAGAGATAAAGGCTGGTGC TTCCAGGAGCGTGGGTCTCCTACGTTTGTGTTCCTGGGAAGAATCTTGGA CTCAGGCGTGGGCAGCTGGATGCCTGGGTTCCTTAGGCTTCCTCCAGGCA ATGTAGTTGCCTCTTTCTCTCCCCGCGTACATAGTAAGTGTATGATAGAT GTTTGATTTGTAAATTACAAATATAAATTATCACCCCCATTTCCATTTAT TTTCTTGATATATCAAAATGTGTTGA

>Sequence 824

>Sequence 825

>Sequence 826

GGTACTCAACAAGCAGCTGACTTATGTTTTATTGGACATTGTGATACAGG AACTGTTTCCAGAGCTCAATAAGGTACGCGGGAAAGTCAACTCAGTTACC TCTGTTTGGTGTGTGTATCACTTGCAGATGCTGTCTACCACCTTTTCAGT GACATCCTAGAAGCTTCTCTATTACCACAGTAACTGGCTAACTAGATATG ATCTTTCCCTAATTTTCATGAGCATCTTTTTTTCTGATATAAACCAGGGAG GGAAAATAACAAAGTTGCTTCACTCTGAAGGAGTATTCTCCTCTAGTACC TGCCCCGGCGGAC

>Sequence 827

GGTACATATATGAAAAGCCAACATTCTAAAGTAGAGGTTCACTTAATTTT
TTTTTTTTTCAAGAGAGGCTTCTTGGTAGTTTCATCACACAGTGGTTTTA
TTAGGGGATGTAAGGATTACAGAAACATCGTATTTTTTAACATATAGTAT
TTTTTGAATATGAATTTGAATTAATATAGAAAAGTGCATTTTTTCCAGTTT
TTTTAGGGAAAAGGAGATACTTCACCAGGAGGATAAAAAGGAACAAGAGG
GGAAGGGGAAATAAAAATTCCAGAAAGATGAAAAATTGTTGATGTAAGAT

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GGAGGCACATTNT

>Sequence 828

>Sequence 829

>Sequence 830

>Sequence 831

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>Sequence 832

>Sequence 833

>Sequence 834

>Sequence 835

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>Sequence 836

>Sequence 837

ACTTTTTTTTTTTTTTTTTTTTTTTTTGCAAACTTTAATAGGTTTTCTTAG
CTTGACAACTCATTCTCTATATTCACGAACATCTCCTGACTTGTTCCTTC
AGTGGAGATACCCTTTTCTAGCCAGAGTTGGCAAAAGTAGCAATAGCATG
CATTGGCTTGTTTGAGAGGGCCCTGGGTGAGCCTTTGTTGCATAAAGTAGG
AGGTCTGTTATTGTCTTGGTAGCATATGCCTTCATTATAAGTTTGCCTCT
TTGAAAGAATATTCAAAGACCAACACAAAAGAGAACATTTCCAGATCCAA
GAGAGTGTATGTAGAAACAGTGACAAGTTAGAAAATCAACTTAGGTATCA
GATAGCAGCCACAAAATATGTTCTGAGGAAAAATTCATAGCAATTTATAA
CAGCTGAGAAAAAAGAGGGAGGAGGTAGGTAGATTTTGTCAGAACTT
ACTAGACTAAGGATNTATTGCATATTTTTTACTAATTAAATGTTGGGGAT
GTCAGACGTGGTTGAAAAATAATTAAAAGTCTGGTTAAATAAGGCTTTTTC
ACCCTAGCTTACCTA

>Sequence 838

ACTACAAAATAATGAAGCCAGCTAATTACCATCAGGTTACAACTTTACA
AAGAAGTGAAGCAGCAAAGAGCTGAAGCAGAAATGACATAGGAAAACAGC
AGCAAAGTCCTTGAGTCCCAACAGTCCACCTCAAAGACAAACATACTAAA
GAACAAAGGCCCCTAATCCACCTCCTCACCGGGTACTTINTTTTTTT
TTTTTTTTTTTTTCCAGTTTCTGTTTCAAATTCTTTATTATACATCATGGT
TGCACAATTTGAGGCTGGTTAAATACAATTGGTTTTCAAAATCTCTTTGA
ATATTTTCTGGCTTATTACATGCAAATGACCATGAAAAATATTTGGCATTT
TAAAATTCTGAAACTCTGAATAGGCACTTGCATGAAGGAAAACATTACCA
TTCATAGATATCCACATGTAGAACAGATGCTCCAGCACATGGTGGTACC
>Sequence 839

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>Sequence 841

>Sequence 842 GGTACAGTGGCGTGATCATAGCTCACTGCAACCTCCACCTCACAGGCTCA AGTGATCCTCCCACCACAGCTTCCAAATAGCTGGGACCACAGGTGCAAGC CACCACACTTATTAATGTAGATTTCCTTTGTAGATGTAGATTTCTTTTAC AAAGTGACAGCTTTTCAGAGCTAGTCCTATGTCTGCAGTTTCTCAGAATA ACCAGCTCAAAATATGCCAGAGAAGTATATTTTGGGGTGGCATATTCTAG TCTCCTCCAGTCATATTTTGGGGTGGTGTGTCCTGAGCCCCAACAAGATA GGGTTCATTTTTGAAAATTGCTCTTCCAGTCCCACTGTTCATCTCATAAG CCCAGGAATCACCACCTGTTGATTTCCTAGGCATCTTCTTGCTCAGGGGA TGATGTCAAGGATTTTTAAAAGCCAACTATCTCACTGTGGTCTCTTAATA GTCACCCTCTGGGCTGCTCATTTCATGAAGCTTAAAGCTGATAACTTGGG GGACAAAAGGGTTTGGGTAACAAATTAATTTTTGTCTCCGGAAATACCAA CCATACTTTTCTGGCTGGCTTGAGGAAAATTTAACTGGGGATTAATTCTG GCTAATTGGTTGGGAGCCCCCANTAGATTTTACTACAATAAAGAGGTCTG TCCCGGGGCCGCTAAAAG

>Sequence 843

GGTACTTTTTTTTTTTTTTTTTTTTTGCCTATTAATTGATTAGGAAAAAATAG
GTAGACCCTGAGTGAAAGTAGAAAAGAACCATTCTGGTAAAAATTCTGAA
AGTAGAAAAGAACCTTTAGCTTTAAAGGTATGTCTTAATAGAGCAGTGCT
AAGACAGGTGGTTAGGTATGTGAATGCATGCCACTTAGAAAAGAATATGA
AGGAGAAGGGACCAAGAAGGCAGATACATTGCCCCTGATAAAGAAGTCAT
TTTTCTCTCACCTTTACATAAATATCAGCCACTAAAAATCTAGGAGCACA
AATAATGAAAGCGAACCCTGTTCGCTCTGTTTGTGGAAAGGCTCATTAAT
ACCTGCCCGGGCGGCGGCGGTCGAAAAGGG

>Sequence 844

ACAAGAGAACGGACGCACTTACTGAGCCCATCGCAAATGTCAGGCTCTG
TGCTATACTTACATATCCCATAATCTTCAAGACCCCTCAAGACCCCACAA
AGTAACACAAAGCAGGAAACTAACTCAGATTTACTTGCCAAAGGTCACAC
AGTTAATACATGGTGGAATCAGGACTCAAAATCAGGCCTGTGTGACTCCA
AAGTCCAGTGCTCTCCCACTTTACCAGGTAACCTTCATAATACCGGATT

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>Sequence 845

>Sequence 846

>Sequence 847

>Sequence 378

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CTGATTCCTGAGATAAGAAAGTGGATTTGATCCCCAGTCTCATTGCTTAG TAGAATAAATCCTGCACCAGCAACAACACTTGTAAATTTGTGAAAATGAA TTTTAATTTTTCCTTTAAAAAAGAAATTTTTTAAACCATCACACTTTTTT TCCCTACCCTTTAGATTTTGATAAATGATAAAAATGAGCCCATTATCAAA AGAAAAACTTGTTTTTACTCCAAAATGGAATAATCTAAATTTCAAATAAT **GTACCCTGG** 

>Sequence 379

CGCTGTCTCCATATGTGCTCATGTGTGGTATCTTACGTTACTTGTTAGTA TATAGCTCACTTTCGCGCTCGGTAGTATGGTATCGTTTGGTCAACTTTTA TTCTCTTGATTTGTATATTATCNANTNNNCNNGGGGATGGTGTCATAGAG GCGGCTACCGAGGNGCCGGCCGAGGGACTGCTAGCCAGCCAATAAAATAT AAACTCCATTTGTCTTAGTTATATAGAACTGTGTTTCCAGCTTAGAAAAA GTCAAACCAATGACTTGTAGAACAATCTACTCTCATTTTTTATTCAGCCT CTAGAACATGGAAGCTTTAAAAGTGAATTGGCTAAATAGGCAAGACCTTC TGAAAGTTAACATCTTAATGATTAAAAACAGTAAGTACGCACAACCGAAG CGTAGAGTCACACTTGCAACAAAAGGTTACAATATTGTAATGGGCTCTGT CCGGTTCTGCTTGTCCAGCTGGACCATCTATTTCATCCTCCTCCTCTGAG CTGTCATTTAATTGCTCATAACAGTAGAGATCAGTTGTCTCTGGTTGCAA CTGGGTTTCTCTACGTGTTCTTGATGATCTGCAACAAGACATACCTCGAC CGGGCCACCGGCCCCTTATATTATGGAATCTTTGCTTTTTTGGCCAGAGGT CTTTGCTTTTTCAGGACACAAGGGCTTTTGACAGGTAATACACCTAACG TTGCAGTGACGGTGGT

>Sequence 380

TCGTTCTTTTTTTTTCTTCATTAAGTTTTTCTTTTATACTAGCTATTGTA CATTTTCCCTTAAGCGGGTTGTGACGTCGTTGAAATTGCAACGCTCAAAC TTCCAACACTTGGTATACACTTGTAACCCAGCTTTGTTAATGAGACACGC ATCAAAATCAGATGAACAATTGACGGCTGTTTTGCAGTCAGCAGTTGGGT TAGGACAGTTGTAGCACTGCAGGCTATGTCCTGAATGGCAGAATGACAGT TCGGACGAGCTAGTAATCTGAACAGGACAGAACTCTCTTTGTATTCCCTA TTGTGATTGTTCACAGAACTACTTGTGTAGTAGGTTTTAACTACTACACC AATTGGTGGCTAAAGACTGTCGTCTCCTATTTATCCTTTTTTAGCCTCGA GCCCGTTTATTCCCGCGTTCCTTGCTCGGGCTGGCCGTTCTAGAACTTAG TGGAATTCCTTGGGTCTGCTTGAATTTTATTAACAAGGCTTATTCGATAC CCAGTTCAACTTTTGGGGGGGGCTCGGGCACCCAGCTTTTTGTTAACCTT TAACTGAGGGGTTAATTAGCTCTGCTTGTTGTAATTAATGTTTATAGAAT GTACCCTGGGTGAAAATGTTATTCTTTTACAATTTACATTACAACATACG ATCCTGGCAGCTTTAAGTTTAAAGTCCTGGGTT

>Sequence 381

TTAGATGGCTCACCGCGGTGGCGGCCGAGGTACACCATGTGAAGACTGGA CTTAAACAGCTACACCACCAGATGCCGAGAGAGAGGCTGGAACATAGCCT TCCCTTTGGAGGTAGCCTGGCCCGGTGGGCACTGTGATCTCAGACTTCCA GCCTTCAGAACTGTGAGACAATATTTTATTGTTTAAGCCACTTATTTTTT GGTACCTGCCCG

>Sequence 382

TACTCTTTATATATTTATATTTGTATTATTTCTTATAATCTTTTTACTGC... TATTTTATTACNANCAGGGTTGTGCTCGTAGCTCNCTTCGCGGNGGCGGC CGAGGTACTTTTTTTTGTGTGTTTTTTTTTTTGAGACGGAGTTTCACTCT TGTGGCCCAGGCTGGAGTGCAACGACACGATCTCAGCTCACTGCAGGGTT TGCCTCCTAGGTTCAAGCTATTCTCCCTCCTCAGCCTCCCAAGTAGCTGG GTAGACGTGGAGTTTCTCCATGTTGGCCAGGCTGGTCTCAAACTCCTGAC CTTAGGGGATCCACCTGTCTCAGCCTCCCAAAGTGCTGGGATTATAGGCA

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>Sequence 383

ACCCCTCTTCTCTGTTCTTTATTAAATTCCATGCTAAATTTACTTATCGT GTACATAGGTCTTAATCTAAATTACTACGTCGATCCCCACATATCTAATT CTTCCNNNNNNAAGGGATGTGCTCCTCGCGGGCTCCGAGTACTCCAGNC CCCANATTCGGGTGTGGGACACGGCTCTCCATTCTTCTTCTTGGCTTTAC AGGTTCCCAGGTCAAGAGCTTCACCCATAATTAAGAGCTTCTGAGGATGA TCGATAAATAAACACACCTCCTCTTAACCATCCTTGGGCTTCATGGGGGT GGCATTGAGGATCCCTACAACAGGCCCCTGGTGCCGCTTCCAAAGCGCGT TTGGAACTTCCTCCAAATAAGAACAAGGACACACATTGGTGTCAGGGTAC GAAGATCATTCAGTTTCCATATGCTCAAAGGTTTTTCCACTATTCACACT CTTGTGGCGGTAACCTTTTTTCAATATTAACCCCCAAATGTCACCCCAAT CCTATTTCCTTCCAAGCTTCTTTTCTGGCCCATCTTTTTCCTTGAATCTG AGACAAGTCTGATCCAAGTTTTCGGCCGGTCTAAAAACTAATGGGGACCC CCCGGGGCTGGAAGGAATTTCCAATATCAAACTTTATCTGATACCCGTCC AACCTCCAAGGGGGGGCCCCGGTACCCCAACTTTTTGTTCCCTTTTATG AAGGGGTAATTTGCGCGGCTTGCCGTAATAATGGGCATAGCTGGGTCCTT **TGTGAAAATTCG** 

>Sequence 384

>Sequence 385

>Sequence 386

Page 139 (of 261 pages in Table 2)

>Sequence 387 AACGAATGTGTCCGTAATTGATGTCCACTTCNCACCGN CCAGCCGANNTTGATTCTTCAGTCCTNAGCGATGGAGCCCAGGGTCCCTT GTTATTGTCCCCTTTCTCTCAAATGCTTGGCTTGTTNTTCAAGAGAAC CTGTCTCGGTGGTCATTGCTCCATCGATTGGATCCAGTCCTTCTTCAAAN CATTGTTCAAGGCACTTTAANGCTAGCCTGAAANCGCTTGAATCCCTTGC TAATACTATTCCAGTGTGATCTGAGAGGGTGGTACCCTCTNGCCCGCCTC TANGAACTACNGTGGATCCCGCCNGAGGCTGCATTGGAATTCNGAATATC NANAGCTTATTNGAGTACCCCGGCNGACACCTCGACGGGNGCGGGCCTCC NGGTACTCCANGCTTATTNGTTACACCTTATAAGTNGACTGAGTTTAACT TNGTCGCACCNTATAGGCNGTCANTACAATAGTGTCAATACGGCTTGTNT TGCCTCNGTTGTGAGAAGTTNGATTATCCTGCGTCAACTAATTGCCCACA ACATACAATACCGACGCCCGCGCAGGCTATAANANGTCGTTAATAGCTC TGGTTGCTNGCGTNATCTCGAGGTGAGGCTAAACCTCAACAACTTAAATT TGCGGNTCGCGCGCTCAACTGGGCGTGCTCTAACACATGACAGGAGAAAC CCTCGTCGGTCGCCACACTTGGCGATTTAATTGAGATTCNGGCCCAACTG CTCGCCGGTGGAGAGAGCGCGGGTTNACACTATTTAGAGGCGCTTAGTTC TCGCTTTCCTTCGACTCAATNTACCTTCCCTTGCGCTTCAGGGCGTATCA CGCTTCGCGGCCAAGACCGTAATCATACTCTCATCTCAAAAGGGCGGGTG ATACCGCGTTATTTCAACANTATATCAGTGGGATAACCGCAAGTAAATAA CACTTTGAGCACAACAGGCCCGCACAAGGCCCCATACCCGGGAAAAGCGG CCCCTCCTTTGCTTGTTCTCTAAAGGTTCGCCCCCCTCTGCGCACGAATT AAAATATTCGCACCTCTAAGTACAAGGCG

>Sequence 388

CCGCGCTTTACACATTGAGTGCTCCTTTCCCCNNCCAGNCGAGNA CCCCAGGGAGAGATCAAAAATCATCACCAACCATAATATATCATGGACTA ACCCCTAAACCTTCTGCTTAATGAATTAACTACAAATAACGGGGCAAAGA GAGCCACAGCTAATACCCCCTAAACCACACTAGCTACCTAAGAACAGTAA AAGAGCACACTCTTCTATGTAGCAAAACTAATGCCAAGACTTATATCTAG CTTACTTCAACTTTAAATTTGCCCACAGAACCCTTTAAATTCCCTCCTAA AATTAACTGATAGTCCAAAGACGAACAGCTCTTTGCACACTACGAAAAAA CCTTGTTAAGAAGAGTAAAAAATTTAACACCCCATAGTTTGCCCTAAAAC GCAGTCACTCATTTAACAAAGCTGTTAAACCTAAACACCCCACTTACCTAA AACAATCCCCAACCATATAACTGAACTTACTCACACCCAACATGGACCAG ATCTATTACCCCTAAAGAAAAACTAATGCTAAGTATAAAGTAAACATGA AAACATTTCTCCTCCTCATAAGCCTGACTTCAGATTCAAACACCTGAACT GTCTTTTAACACCCCAATATCTTCCATCAACCACCAGGTCTTTATTACCC AAGGAACACTGCAAATCTTAACCCCCATTTTACCCAAACACTTACCTTTT ACCTTACCCAGTATTAGAAAGATCCTTCTTTCCCAAGAAAAATGTTTAAC GGGCCCTTAAAAACAACTGAATCCCCCGGCTTCAATAATTCAATACC

>Sequence 390

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### TCGCTTACGGTGCGATATTT

>Sequence 391

>Sequence 392

CTTATATTGCCTTATATTTTATTAATACTATATTTTTCTCACCGTTTTTT ATCCATAAATTTTCTTGTTATATATGGTTTTGAACACTCATATAATTTTA TTATNTTANTATTATGTTTGTAGCGATTCACTCT

>Sequence 393

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GGCGACCCTTATCTGGTGGCGGCCGAGTACTTCATTTACACTTAAGCTAG
AGAGTTAGGATCTTAATTTATTTAAAGCCATAGATTCAGTTTAGCTTTAA
CCTAGACAGAAAGTGAAAAGCATTTTACAAGTAGAAGAGGCAATGAGAAA
TAAGGCAACAGATAATACGTCAAAGCTGGAACAAGGGCAGAATCAGAACG
TGTCTGGCTATCAGCTTTGTTTTTTGACTACTAAGGCCAACCTTTTTATTC
CTCTGGATGGTCTGCAGACCAAGTTCAGAATTTAGGCAAAAGGATTTCCA
AATGGATCCCTATACATTTTCAGAAGATTCAGGTTGAGGAAGAAGCCACA
GAGGGCTTGTGATGAACCCAAAGGAATCTTTAAAGAAAGGGTTCTCAAA
ATGCATTGGCCAGGTAGATTTGGTTAACTTGGCAGGGAAAACTTGTCCTG
GGGAGC

>Sequence 396

>Sequence 395

CTCTTAGTGGAGGGGTTAAATTGGCGCCGCCTTGGGCGTAAATCAATGGG TCCAATAGCCTGGTTTTCCCTGTGGTGGAAAATTGGTTTATCCCGCCTCA

> Page 141 (of 261 pages in Table 2)

CAAATTTGCCACCACAAACCATTACCGAGGCCCGGGGAGGCATTAAAAGG TGTTAAAAGCCCTGGGGGGTGCCCCTAAATGGAGGTGGAGCCTAAACCTG CACCATTTAAATTTGCCGTTTTGGCGGCTTCAACTTGGCCCCGCTTTTTC CCAGGTCGGGGAAAAAACCCTGGTCGGTG

>Sequence 398

GGGACCACTCACCGGGCGGCGGCCGAGGTACAAAATTTAGAGGTTTCCCC
TTTATCAACAAGAGACCCAGGTGCCAGCATGTTACTACCAGATCCAGTTC
TTCTTAGGACAGTGTGGCTCAAAGGGATGAGACCTTCCAGACACTGGTAT
CTGAGCATCTGGGCCTGCCCCTGAGTTGTCAAGAAATTTCTTATCTCTGA
AGGAGTCCAGACAGGAATGCTTCCACTGCTGGGTGGGTGCTCGCCCCTCT
TGCTCCTTAAGCGCCCGGCTCACCCCCCTTGCTAGCACAGGGTGTCTTACA
CAGTTTATGGGACTTTTCTGTGAACTACCTGAGGGCAAGAACCATGTCCC
ACTCCCTGCTTGCTCCTCAAATATTTTATAGGAAAGCAGTCCACAGTCTC
ACACAGAGGAAACATGAAGTTTAAGTTCTAGCCCTATGA

>Sequence 399

GCCTCCTTCGCCTTCTATCTCCCTTCGTATTTATTCTGAATCTGCTCAGA TACTCATCTCTTCTTATACGTATTCTATTATTTCGTTTCACGCTCAT AGTGTATNACTCTTTTTAATAAAATAATATATGGGTTGTGCGCGGAGGCC GCCGAGTACTCGGGGAGAGAGGAAAAGAACACAGATCTCGCATGGTTCAG ATTTTTCTTTTTAGGTCCAGGAGTAAGATATATCATACGAAAATGAAAAT TATAATTCTTCTTGGATTCCTGGGAGCCACATTGTCAGCCCCACTTATCC CACAGCGTCTCATGTCTGCCAGCAATAGCAATGAGTTACTTCTTAATCTT AATAATGGTCAACTTTTGCCACTACAACTTCAGGGCCCACTTAATTCATG GATTCCACCTTTCTCTGGAATTTTACAACAGCAGCAGCAGCTCAAATTC CAGGACTCTCCCAGTTCTCTTTATCAGCTCTAGACCAGTTTGCTGGACTG CTCCCAAATCAGATACCCTTAACAGGAGAGGCCAGTTTTGCCCAAAGGAG CCCAGGCAGGCCAAGGTGATCCCTTAACGTTTTAAAACACCCGCTAAGAC ACAACCAGGCCCCAATCACGTGAAGCCCTATGTATTCTCCTTCAAAAAGC CTAAAGAGGCAGGACAGATGTTTAAATACTATTCCAGTTACATGGGCCTA CCCTGGGAACCCCCTCAGAAACAGGTTCCAGGGCACCTTAACCAAACAGA ACGGTATCTGTTTGGGGAGCCCATTCCATTTTTGCTTAAACG >Sequence 400

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GCCCTGGTAATGTCTGCATTCAACAATGACGCTGGCTTTGTGGCTGCTCT
TGATAAGGCTTGTGGTCGCTTCATAAACAACAACGCGGTTACCAAGATGG
CCCAATCATCCAGTAAATCCCCTGAGTTGCTGGCTCGATACTGTGACTCC
TTGTTGAAGAAAAGTTCCAAGAACCCAGAGGAGGCAGAACTAGAAGACAC
ACTCAATCAAGTGATGGTTGTCTTCAAGTACCTGCCCGGGCGGTCGAGCG
GCCGCCCGGGCAGGTACCGCGGGGGCTAACCAGGCCAGTGACAGAAATGGA
TTCGAAATACCAGTGTGTGAAGCTGAATGATGGTCACTTCATGCCTGTCC
TGGGATTTGGCACCTATGCGCCTGCAGAGGTTCCTAAAAGTAAAGCTCTA
GAGGCCGTCAAATTGGCAATAGAAGCCGGGCTCCACCATATTGAGTGTGC
CCATGTTTACAATAATGAGGAGCAGGTTGGAACTGGCCATCCAAACCAAG
ATTGGAAATTGGCATTTTGAAGAGGGAAGACCTTAATTTCCATTCAGAGG
CTTGGGCCCAAAACCATTCTACCCCGGGTGTTTTTCACCCCGCCCTTGAAGG
GGGCCTCAAAAAATATTTCATTATGCCATG

>Sequence 401

GGTCGATCGGCGGTGGCGGCCGGTTGACCTTGTATGTCACGAGCAATTAG GAGAGTCAGAGGATGAAATAGATGAACCCGACCATGCAGTTAATCACCAA CATCAACTACTAGCCAGACGGGATGAACCACAGCGTCACACAATACAGTG TTCCTGTTGTAAGTGTAACAACACACTGCAGCTGGTAGTAGAAGCCTCAC GGGATACTCTGCGACAACTACAGCAGCTGTTTATGGACTCACTAGGATTT GTGTGTCCGTGGTGTGCAACTGCAAACCAGTAACCTGCTATGGCCAATTG TGAAGAGATGGGAGTCTCCCCGTATTGCCCAGGCCGGTCTCAAACTCCTG GGCTCAAGCAATCTTCCCGCCCACTTCCCGAAGCCCTAGGATTACGGGA GTGAGCCACCGCACCCAGCCAGAAAAACGTTTCAAATATTGGAAAACCTT

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ACTTTTTCAATGAGCATTTTTGCATCAAGGGGTAACAGGGACATTAGGC TTTTTTTTCTTTTAAACTTCCAACAGGAAGGGTCGGAATTTATCAAGACA TTACATAGGAGTTAGGGCACAGCCACGGGTGGTGGTGGGGAGGACATTTT CCAGCCTTATTAACAGGGTTTATTATAAACAGGGTGGGCCCACTACTTGT CTAACCTAATTCCAGGTCAAGATGTGT

>Sequence 402

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CTCAAACTGGAAAAAGTATCTCAATGTCCTGAATGTGGGAAAACCTTTAG
CCGAAGTTCTTATCTTGTTCGGCATCAAAGAATCCACACAGGCGAGAAGC
CTCACAAGTGCAGTGAGTGCGGGAAGGGCTTTAGTGAGCGCTCCAACCTC
ACTGCCCACCTACGAACTCACACAGGGGAGAGGCCCTATCAGTGTGGGCA
ATGTGGGAAAAGCTTCAACCAGAGTTCCAGCCTCATTGTCCACCAGAGGA
CCCATACCGGGGAAAAGCCTTACCAGTGCATTGTCTGTGGAAAGAGATTC
AACAACAGTTCCCAGTTCAGTGCTCACCGGCG

>Sequence 403

>Sequence 405

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TGAGCCTCCCAAACCGCTTCCATAAGGCTTTGCCTTTCCAACTTCAGCTA
CAGTGTTAGCTAAGTTTGGAAAGAAGGAAAAAAGAAAATCCCTGGGCCCC
TTTTCTTTGTTCTTTGCCAAAGTCGTCGTTGTAGTCTTTTTGCCCAAGG
CTGTTGTGTTTTTAGAGGTGCTATCTCCAGTTCCTTGCACTCCTGTTAAC
AAGCACCTCAGCGAGAGCAGCAGCAGCGATAGCAGCCGCAGAAAGAGCCAG
CGGGTCGCCTAGTGTCATGACCAGGGCGGGAGATCACAACCGCCAGAGA
GGATGCTGTGGATCCTTGGCCGACTACCTGACCTCTGCAAAATTCCTTCT
CTACCTTGGTCATTCTCTCTCTACTTGGGGATGTGGCACTTTG
CGGTGTCTGTGTTTCTGGTAGAGCTCTATGGAAACAGCCTCCTTTGACAG
CAGTCTACGGCCTGGTGGTGGCAGGGTCTGTTCTGGTCCCGGGAGCCATC
ATCGGTGACTGGGACCAAGATGCTA

>Sequence 406

TGAAATTGTTGTCCTGNGATTACCTCCCCGCGGTGGCGGCCGAGGTACAG TTCACAGTGCTTGATGATAATAAATGGTTATTTTACTGGTTCATGTATTT

Page 143 (of 261 pages in Table 2)

>Sequence 407

TGGGGCGTTGGCCCTCTCCGCGTGGCGGCCGGTGTGCTCATCGTAGCCTC

>Sequence 408

>Sequence 409

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>Sequence 410

> Page 144 (of 261 pages in Table 2)

#### **CCATTTCTCCAAGGGGGG**

>Sequence 411

>Sequence 412

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AGAAGTTTCTAAATGGGGCCAAAATTCAGACTTGAGTATGTTCTTTGAAT
ACCTTAAGAAGTTACAATTAGCCGGGCATGGTGGCCCGTAGTCC
CAGCTACTTGAGAGGCTGAGGCAGGAGAATCACTTCAACCCAGGAGGTGG
AGGTTACAGTGAGCAGAGATCGTGCCACTCCAGCCTGGGTGACAA
GAGAGACTTGTCTCCAAAAAAAAAGTTACACCTAGGTGTGAATTTTGGCA
CAAAGGAGTGACAAACTTATAGTTAAAAGCTGAATAACTTCAGTGTGGTA
TTACCTCAAAATCCTTCTCTTTTCCCCAAAATTAAGTGCCTGGCCAGCTGTC
ATAAATTACATATTCCTTTTTGGTTTTTTTTAAAGGTTACATGTTCAAGAGT
GAAAATAGATGTTCTGGTTGAAGGCTACATGCCGGATCTGGTAATGAACC
TTGTAATGCTGTATTTGCTTCACGGCTTACTATAAATGTTACTTAATACA
TATCAACTTATTACAATTTACTATAGAGGGTATAAGTAAATTAATCTCTA

>Sequence 413

>Sequence 414

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>Sequence 415

CTTGAACTTGTTTTGTCTGCTTCCGCTAGCGGATTTAGTTAACTCAAAGC TGTAATTCCGGTATCTCAAAATAATGTGATTACCCCGGAATTACCTTTTT TCAATGGTCTCTAAAATGCCATAACCTTATAAGGGCCGGTTGATTACGCT TTCATATAGTTGGCCCCCTGCCAGTCTATAAAAAAGT

>Sequence 416

>Sequence 417

>Sequence 418

>Sequence 419

AGGTACAGTATATTGACCTTAAAAATCAGTAAAGCAGTCATGGAAATAAC AGGTCGTGTATTATTCATGGGCACAAACTGACTCATGGCTGGGAAGAAG CAGCCACCTTAGACCAGATGGACAAGCCAGATACTGCAGAGAAGTTTCTG

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>Sequence 420
NCCCGATGCGNCTTACTTGAGGCGCCCGAGGTACGCGGTGGTCGGCGCCA
TTTTGTCTCGGCAGCGGTGGCCGTAGCTCCATCGCATTTTATGTTTCTGG
CGAGAAGGGAACGGAGTTTTCATCAGGTAGATTGGTTTTTGT

>Sequence 421

GAGGGATCATCCGACCGGGGGGGGCCCCCCCTGCCCTGAAAGACCTCC
TGCTGGAAGACCTCCAGGATGAGAAAGTGAGGCTGGGTGGCTCCCTGCGA
GGGCATTCAGCAACAATGAGAGAAATTAAAAACTTCTTCAGAGTCAGTTT
CAAAAATGGATCCCAAAGTCAGACCCACTCGCTACAAGCCAATGACACTT
TCAACAAACAGCAGTGGCTTAACTGTATTCGTCAAGCCAAAGAAACAGTT
TTGTGTGCTGCCGGGCAAGCTGGGGTGCTTGACTCCGAGGGATCGTTCCT
AAATCCCACCACCGGGAGCAGAGAGCTACAGGGAGAAACAAAACTTGAGC
AGATGGACCAATCGGACAGTGAGTCAGACTGTAGTATGGACACGAGTGAG
GTCAGCCTCGACTGTGAGCGCATGGAACAGACTCTTTCTGTGGAAA
CAGCAGGCACGGTGAAAGTAACGTCTGACAGAAGCATGTGCACTTCGGGA
AGCAGGCCTGCATCTTACCTTGCCG

>Sequence 422

>Sequence 423

TTTGGANTNGCCACTCCACCGCGGTGGCGGCCGAG GTACGCGGGAGAAGGAGATTACCTCAACATAAGAACCGTATGTGAAAAGC CCACAGCTAACATCATACTCAATGGTGAAAGACTGAAAGCTTTTCCCCTA AGCTCATGAAGAAGACAAGGAGGCTTGGTTTTTGTGGCTTCTATTTAACAT TTAGACAGGGGGAAGTAAAATTATCTTTTTGCAGATGATATGACTTATAT GTATTATAGAAAACCCTGGGCCAGGTGCAATGGCTCTTGGCTGTAATCCT AGCACTNTGGGAGGCCGAGGTGGGTAGATTGCCTGAGCTCAGAAGTTTGA GACCAGCCTGGGCAACACGGTGAAACCCCGCCTCTACTAAAATACCAAAA AAAAAAAAAAAATTAGCCGGGCGTGGCGCATGCTAAGGCAGGAGAATT GCGTGAATCTGGGAGGTGGAGGTTGCAATGAGCTTGAAACTTGCCACTGC GGAGAGAGACCCTCAAGATTACGCACACACACACAGAGCCCCTGCTTGA ATAATAAATGAGGTCAGCCAAGAAGTTCCGGCATATACAATCAACAGGCA AAAATCCCTTGTTTCTTAGCCCTGCCATTAAAATTTNNAAAAAGAACTTA GAACTTGCCCGGC

>Sequence 424

> Page 147 (of 261 pages in Table 2)

GTGTGGTGGAGGACGACAAGGTGGGGACAGACTTGCTGGAGGAGGAGATC ACCAAGTTTGAGGAGCACGTGCAGAGTGTCGATATCGCAGCTTTCAACAA GATCTGAAGCCTGAGTGTGGGTACCTGCCCG

>Sequence 425

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AGGATGGAAAAGAGCTAACAAGTGACAACAAATACAAAATAAGCTTCTTC
AACAAAGTATCCGGCCTTAAGATCATCAATGTAGCGCCGAGTGACAGTGG
GGTATACAGTTTTGAGGTGCAGAACCCTGTTGGCAAAGACAGCTGCACAG
CTTCATTGCAGGTTTCAGGTTGGTTGATTTCTTGGGCTTTTCCTTCATCA
TTATAATAATGTAGTTCCTGATTTTCATAAAATGTATATGGGTTGTTACAT
CTTCTATAGGATAACATGAGTCCGACATCTTCTGAATCAGCAAATTCAGA
GGCAATACCATCTCAAGAAGCCACCATTGAGACCACAGCCATTAGCTCAT
CCATGGTCATCAAGAACTGCCAGAGGAGCCATCAAGGCGTCTATTCTCTT
AAAATGAGAGGCAGGACTGGCTAGGTGATGCCTAAAGATGATTCCCAGG
CTTGACATGCTGGTATTCTTACATATCTATTCGTGGCTGTATAATCTGTG
CGATGAAAATTCCAAAACCGAGACAGGAATTCGCACTTGTTAAAGTGGAA
GCTCCAAGCCTGAGATCCAATTGG

>Sequence 426

>Sequence 427

GAAATGATTANTGCCTGACCGCGGTGGCGGCCGAGGTACCTTACTTAGCA
GAGCACTTTGCAAACATATTACTTATTAGCAGAGCTCTTTGTAGACCTTC
CACATCTGGCTGTCAGATCTTAAGGTTGTGAATTTAGGCTCCAGTTATAT
TCACTGGAGAGCATAATCCCACACGGGTTATTTATAAATACAGAGCCTCT
GATTGGACGGTCTCCTGCCAAGAACTAGTAATACCCTTGTTTTAAAATCT
TCACAAGGTAAAACTTAAAAAGCCAACCAAACAAATTGCTCTCCATTCTA
CTTTTAATTGGGCCAAACAGCATATGCTACAGTAGTAACATGTTTTTCGG
AGAGTGTAAAAAACTCTGTTTACATTTGCCTCCCGTGGGTTGATCGAA
AATGTATAAAAACTGACTGCTTCTCGCCAGCCTCAGACAAGAAGAGTGAGC
TGCTGGT

>Sequence 428

>Sequence 429

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TAATTTACTTCATATCTGACTCTACCTCTATCATACAACTATTCGTCTAA
TAAGTTTGTATACGATTATTAGGTGTGAGAGCATCATCATCATTACCACA
TACAANTAAGGGGNNNNGAGTTGATTTGATGCNCCCTTCGCGGAGGCGGC
CGAGGTACAATTCATCTAACTTGCGGAAAGCACTTTCAGGCCAAATGCAG
AAACGTCCCACATGCCCACCAGGAGCAAGCTTCAAAATGTTCACTTGGGG
CATTAGGCAGAGTAATTCCAGGGATGTTTCTGAAGGCCTTGATGATACCA
TTATCCTCATTATAGATGATGCACGGGCCCCTGCGCTGGATACCGCGACG
GTTTCTCATTTTGCCTTTGACAGCTCTCATTCGCTGAGAGGCATAGACCT
TTTTGATATCATTCCAGGCTTTAAGGCTTCTTAAGGAGCAAAACAGCTTC
CTTGGTCTTATTGTAGCCTTCAACTTTATCTTCAACTACCAAAGGAAGTT
CAGGAACTTCCTCAATACGATGACCTTTAGACATGACCAGTGCTGGTAGG
GCTGAGGCAGCCAGGGCAGAACAGATGGCGTATCCTTTTTTGGTTCCCGC
GTACCTGCCAG

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>Sequence 431

>Sequence 433

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CTGGCACAAATGGTACCT

>Sequence 434

TGGCTATAGAGACTTCCTCGCGGTGGCGGCCGAGGTACTTTTCTAAAAGC
TCATCCACTCTATCATTTAGATATCCAATTTTCAGAATGTGCTCAACATT
GGCCACTCCATCTGCCATTCTTAAGTCTCCTTGGGAGTCTCCCAGAAGAA
TTATGTTACTATTGTCTTTTAGTTGATTGAAATATTCTGTATTCCTCAAG
GCACCATCATGTTTGTTAAATACATGAATTAGTTCTCCTTTAAATCCTTT
GAGCACCCCCTATGAAAAATATAAATCTTTTGAACAGGCTTTAAAAATTC
TATTTGTTGGATTTTCATATTTTTGGAGCTCTTAATTGATGTCACTATTAT
TTCATCATATTTTGTAAATACATCTTTGATACTAGAGATCTCAAAGCACTT
AAGTCCATCACATTCACCATAGCTAAGAAAGGGCTCGGAGAAGTAAATGAT
TTTTTAGATACTATTTTAAATGGTAAAAACAAAAGCCGGGCGCAGGGGCTC
ACACCTGGTATCCCAGCACTTTGGGAGGCCAAAGAGGACAGATCACTCAG
GGTCAGAGTTCGAGACCAGACTTGGGCCATATGGTGCCAACCCCCCTCACTA
AAATAAAAAATTAGCCACGTTTGTGGCACGCACTGTAAT

>Sequence 435

GGGATGATGTGACCCTGTCCGCGGTGGCGGCCGCCCGGGCAGGACGCGGG GGTTGCTCAAACCGAGTTCTGGAGAACGCCATCAGCTCGCTGCTTAAAAT TAAACCACAGGTTCCATTATGGGTCGACTTGATGGGAAAGTCATCATCCT GA

>Sequence 436

>Sequence 437

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TTATCTTAGTTGTGTACGTTATACTCATGTATCAGTTTGTAATTTACTAA
AATTGTATCTATCATATAGTTACTCATGTTTTTTGCTTGTCGGT
TGGCGGCCGATGTACCTTTTTAGAAGAGAAAAGAATCTTGAATTGTATAT
ATTTATTTTGCTTTACAGAAAAAAATGGTTTCGTAAATAATTTGCCTATT
TTGGTTAACATAGCACATGGAGATAATCATCTGAAAGTTATAGGGCACTG
CCACTGCTGAATCAGAGCATGCCCAATATTTGAGGTGGCTCTGATTTCCT
GGCAGCTGAACTCGGGTAGTCCAGTGGCCTAGCTGGTCCTGCCCG

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AGTCTTCATCATTTGGGCATCAGAATATTTCCTTATGGTTTTGGATGTAC

>Sequence 439

>Sequence 440

TGGTGTATGTGCCTGACCCGGGGCGGCCGAGGTACGCGGGATGTCTAAAT
ATCTTGTAAAAAGTGTTAAAATAAACAAACCCAGTCAATTAAAAATTTTG
ACTGTTATTGAGAAAACTCCAATGAGGGAAATAATAAGATCTATAAAGGT
CTTAAGAAAAATATAATTTGAAAAAAAACATGTGGCTGAGTGTGGTGGCTC
ACGCCTATAATCCCAGCACTTTGGGTGGCCTAGGTGGGCAGATTGCTCGA
GTCCAGGAGTTTAAGACCAGCCTGGGCAACATGGCAAAACCCTGTCTCTA
CAAAAAATTAGCCAGGTGTGGTGGGACACGCCTGTAGTCCCAGCTACTCA
GGAGGCTGAGGCAGGAGGATAGGTTGAGCCTGGAAGATCGAGGCTGCAGT
AAGCTGTGATCACACCACTGCACTTTAGACTGGGCAAAATAATTGTTTAA
TGATAAATGAGGTTCCTGCCCG

>Sequence 441

CGGATGTGANNATTGATATAGCGACTCCACCGCGGNGGCGGCCGAGGTAC ATTGTAGCTTTGAACTCAGTGTTTAAAAATTCAATCTGGTTACACACTCT ATCTTCTAGATCCCTTGAGACACTGTCTTCCTTGAATAAGGGCCAGGTGA AATGGCATTTCAGCTGTGGAAGGATTTTCTCCAGGGAATTCTTGGTGACC TCACTCATGACTGCCCTCTGTGTCTCTGCTGTTCCGAAAAGCTGGTGACC AGGCTGATTTGTTCTTCAGAAGTCTTCCTGTCTGCCCCCGCGTACTGTTC CTGCAGGTTAAGGCAGGACTGGAACTCCTCCACAGCTTGCACATAGTTTT CAGATTCAACACTAACTTCTCCGAGTTTAAGATGTGCCTGGGCAGCATAA AGCTGTGCTTCTTTGTTTCTTGCCTTTTAAAAATGATCTTTGCTAAATC CAGCATATCCCAGGCAAGCTCTAGGTTCCCAATCTCCTCCTCCTCATTTT CTTGAAGAGACTTGTTTTCAAGGACTGAATCATTTGGCATTTCTTCAGTC TTATCATTTTCTTTATCATCCTCTTCCGAGCCTTCAGTTTCTTCACCCTC TTTCATCTGGTCTTCTCTCTCTTGGGGCTCTTCATTAGCAGCTATCTGAA CTTTGGCTTCAGGTGATTTCTCAGTAGCTCCCTGGGCTACCTTGGTAATA ACCCCATCTCCAGCTGCCTCAAACTCTTTTACAGACAGCNTAGTCTCCTT CTGACTGGGAACCAGCTTTGCCCTGACTTCTNCTTTAGATCCG >Sequence 442

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ATTCATGGAATAGGGTCCT

>Sequence 443

TGCTGATAGNGTCCTCACCGCGGGGCGGCCGAGGTACATGAGAGACACTT TAAGCAGGCTCACAGGAATAGAGTGAGTGCGGACTCAGATTGTTTAAGCT ATCTCTGAACCCATTCCTACTGCGTTTAACTATTTTATTGGTTTCTAACT ACTACCACAGACACGGATACCTCACAGGTTCCATTATTACTCACAGCGTT GTGGTCCGGGTTCATCGCCATCCTGCTCCACGCTGTCATAATCCTCACGC ATCCGCGCTCGGGACCCCTCTTCTATAAGGGACATACACGAGATCACCGA ACCCGTAGCTCCTGCCCTAC

>Sequence 444

TCGTTCTCATACTATTATAATTGTATTCTACTATCTTACATTATCGTATC AATATCNNANNNNTTGTTTGTTTATTCTGATCGGACTCCACCGCGGTGG CGGCCGAGGTACCCAGCCCACCCAGGCAAACAGCTCCGACATGTTTCGT AAGTGAGACAAGCCAGTGCAAGTTTTTTTTTTTTCCTTTGTTTTTTGGGCTT ACCTTCTTGCTTAATGGAATTGTTATGGCTAAGCACATAGAAGGCCAAAA AAGGAGTTTTTCAAACCCAGCAAATCAAGTGCTTGGATTCTGAACTGCCA AAAGAAAACTGCACTTCCCCTCTTAAGTAAAACGAAATGAGTTTCTTAGG TAAATGTATTCATCAGCCCAGATAAAAAAAAAAACCAGTTATGTGAGCGTT CTCACATGTGTGTATATATATAAAGCAAAGAGCCCCGCCCACAAGCCA GCAGCTGGGTGAAATATCAGCTGTCCACGCCGTGGTATTCCAATTCGGGG ATTTGATAAAAGTGTTTT

>Sequence 445

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>Sequence 446

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>Sequence 447

ATTATACTTACCTCTTAGATTTATTTATCTCAAGAATATATCGATTTCAT

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CTTTTATACTTANTTGTACATATTTTTTTAATTATATATTCTATTTATTAT
TATACAAACNATCTAATGCGTTGTATCTTCTCCGGTGGCGGACGAGGTAC
GTTTTGTGACAGGCAATAAAATTTTAAGAATTCTTAAGTCTAAGGGACTT
GCTCCTGATCTTCCTGAAGATCTCTACCATTTAATTAAGAAAGCAGTTGC
TGGTCGAAAGCATCTTGAGAGGAACAGAAAGGATAAGGATGCTAAATTCC
GTCTGATTCTAATAGAGAGCCGGGTTCACCGTTTGGCTCGATATTATAAG
ACCAAGCGAGTCCTCCCTCCCAATTGGAAATATGAATCATCTACAGCCTC
TGCCCTGGTCGCATAAATTTGTC

>Sequence 448

>Sequence 449

GANTTGTGCCTCTCGCGCGCGGGGCGGCCGGGTACAAAAAGCAGGGCCC AGCCCAGCTGTTGGCTACATGAGTATTTAGAGGAAGTAAGGTAGCAGGC AGTCCAGCCCTGATGTGGAGACACATGGGATTTTGGAAATCAGCTTCTGG AGGAATGCATGTCACAGGCGGGACTTTTTCAGAGAGTGGTGCAGCGCCAG ACATTTTGCACATAAGGCACCAAACAGCCCAGGACTGCCGAGACTCTGGC CGCCCGAAGGAGCCTGCTTTGGTACCTGCCCGGGCGGCCGTCGATCTCCT TGTGTTCAAGCAACTTCTTGCGGTAGTCCTGAAGCGCCTTATCTCTAGGG TCCGCCATGATGAGAACCCCGCGTACCTGCCCG

>Sequence 450

TGGGATTTGCCCCTCCGGGGGCGCCGAGGTACTCCCTACGGCACTAGTC
TACAGGGGAAGGACGCTCTGTGCTGGCAGCGGTGGCTCACATGGCCTGT
CTGCACTGTAACCACAGGCTGGGATGTAGCCAGGACTTGGTCTCCTTCCC
GCGTCAAGAGATAGAAAGACCAGTCCTTGTGAAAGACAAGTCTGAATGCT
CCACTTTTTCAATTCTCTCCCATTCTTCAGTAAGTCAACTTCAATGTCG
GATGGATGAAACCCAGACACATAGCAA

>Sequence 451

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>Sequence 453

CTTTATCCCTTATATACATAAATATTATTATTGTTAACACAACTGTTATA TATAACATTATAATATAGTATACTCTATTTTGAGCACAAGATGATCTCTC ATCCANNNAAGGGTGTTGTTAGATTCCATTCCCCGCGGCGCC

>Sequence 454

>Sequence 455

CCACCCCTTATACCAGTTTACATAATGTTGTTATTTTGGTTTTCTCCTA CATAAGTAGATCTTCTCATATTCTTCTCAATCTCTATATTCTACCTGTAA TATCTAAATCNTTGTTCGTTAGCTGGTGGCGCACCCGCGGTGGCGGCCGC CCGGGCAGGTACGCGGGGAGGATCTCTGTCTTTTGTTCCCTCACCTGTCT GCCTGTCTCCTCTCTTCCTGCCTGGGGGGACTGTCCAGAAGACATCAT CGTCCAGTTCCTCTGCATTTGAACAGCTGATCCCCCACCCCTCAATACCG TTTAGAGCAGAAGCCAGCAATAACTAAACGGTCAGGGACAGATAGAAACT ATTTTCGGCTTCATGGGCCACACAGCCTCATTGTAGCTTCTCAAATCTGC TGTTGTAGCAAGAAGAAGCCATATACCCTGTGTAAACAAATGAATATGG CTGTGTGCCAATAAAACTATTCACAAACATAAAGAGTGGGCTGGATATGA CTCAGATACTGTTGTTTGACAACCCCTGATCTAGAGTAAAAATTCCAAAC TTAATAAATATTAATACATATGAAAAAAATATATTCGAGCTGGGCGTT GTGGTCTACTCTTGCATTCCAACACTTTGGAGGCTTAGAAGGCAATCACT TTAGTTAGGGGACAGAACAGCCTGGTCACATGGTGAAACC >Sequence 456

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>Sequence 457

TGCCGTTTGAGTCGACTCAGGGGGGGGGGACGTATATTACTGTGCGAGAGGT
AAAGGATATAGTGGCTACGATTACGGCCTCTCT

Sequence 458

>Sequence 460

>Sequence 461

CTCTTACCCTCGTCTCACTGTACTGATAAACATTTATCTTGCTCACATGT
ATATTTTATACTCTATCTATTGTCTGTAACTCTCACAAATGCACTGAAGA
TTATTGTAGTAATAGTGATTATGTTTTCTCTGTATAATTTTGGGGGTGATTC
GTATCAGTTGCCGTCGGCCAGGAACGCGGGGGCTGTCTACCTGGAGT
TCTAGCAAGTCGGCCAGGATGTCTAAGGCTGAGTTTGAGAAAGCTGCAGA
GGAGGTTAGGCACCTTAAGACCAAGCCATCGGATGAGGAGATGCTGTTCA
TCTATGGCCACTACAAACAAGCAACTGTGGGCGACATAAAAACAGGAACG
GCCCGGGATGTTGGACTTCACGGGCAAGGCCAAGTTGGATGCCTGGAATG
AGCTGAAAGGACTTCCAAGGAAAGATGCCATGAAAGCTTACATCAACAA
AGTAGAAGAGCTAAAGAAAAAATACGGGATATGAGAGACTGGATTTGGTT
ACTGTGCCATGTGTTTATCCTAAACTGAGACAATGCCTTGTTTTTTTCTA
ATACCGGGGATGTGGGGAATTCGGGAAAATAACCAGCTAAACCAGCTACT

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CAAGGCTGCTTACCATACGGGTCTAACAGATTAGGGGCTAAAAACGATTA CTGACTTTCCTTGTGTAGTTTTTATCTGAAATCAATAAAAGGGGATTGGT ACCATAAAATTCTTTCTTATTCTTGTCCCTTGGCCGTTTAA

>Sequence 462

GAGGTTAATCNGATGCCTCCACCGCGGTGGCGGCCGAGGTACGCGGGATA
TTGTTCCTGATTTGCCTGATGTGTGGACGGATCACCAAGCGAGTGACACG
AGAGCTCAAGGACAGGCTACAATACAGGTCAGAGACAATGGCTTATAAAG
GTTTAGTGTGGTCTCAGGATGTGACAGGCAGTCCAGCCTGACCTTTCTGC
ACACTCCAGACAAACTTCCCAGACAAGCTCCTTTGTGCCTCTACGTGGAG
AGGGCGTGGAAAGTTATCACATTAAAAGATGGAGGATTTAAAAAATAAAA

>Sequence 463

>Sequence 464

>Sequence 465

TGAGGTATTAATCCAAACCGNGTGGCGGCCGAACGCAGAGAAGGTAGAAG ATAGCACCATGCCGATTCGTCGAACTGTGAATTCTACCCGGGAAACTCCT CCCAAAAGCAAGCTTGCTGAAGGGGAGGAAGAAAAGCCAGAACCAGACAT AAGTTCAGAGGAATCTGTCTCCACTGTAGAAGAACAAGAGAATGAAACTC CACCTGCTACTTCGAGTGAGGCAGAGCAGCCAAAGGGGGAACCTGAGAAT GAAGAGAAGGAAGAAAATAAG

>Sequence 466

TGGGCTGATGGCTTCACCGCGGGGGCGGCCGAGGTACGCGGGGAGGTCGGT GCGCGCTTCTCCCGAGGTGGAACGGGCGGCAGTCAAGCGCCGGCGTTCTC TGCCGTCACCCTTTCCTTGC

>Sequence 467

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>Sequence 469

GCGATTGGAGCTCCACGCGGTGGCGGTCGGAAGGAGAATGGTATCACTCA GGCTCTCAGAGTGACACTGAAGCAAGACACTCATGGGGTAGGACATGACC CTGCCAAGGAGTTCACAAACCACTGGTGGAATGAGCTCTTCAACAAGACT GCGGCCAACTTGGTAGTGGAAACTGGGCAGGATGGAGTACCTTCAGGATT GGCCTGTTATCTTCTTTAGAACTAAGTTCATCTTAAAAATTTAAGAAGGT GGACATTTCAACACCATCAAGTGCATTTAGGTGACATGTTTAAGTTAACT TGACTTCCTTGAATGACCTAGTTAGTAAACTAGTCACTAGTAATTCGGTC ACCAAGCAAATCAAGCCTGCAAGAAAGGAAGCCAATATTCAAAATGCCAT GTTACCATCTAAACCC

>Sequence 470

TTGGAGCTCCCGCGGTGGCGGCCGAGGTACTGATTTTATTGTCTACCTC
TCTGGACTTGCTCCCAGCATCCGGACCAAAACCATCAGTGCCACAGCCAC
GACAGAAGCCGAACCGGAAGTTGACAACCTTCTGGTTTCAGATGCCACCC
CAGACGGTTTCCGTCTGTCCTGGACAGCTGATGAAGGGGTCTTCGACAAT
TTTGTTCTCAAAATCAGAGATACCAAAAAGCAGTCTGAGCCACTGGAAAT
AACCCTACTTGCCCCCGAACGTACCTGCCCG

>Sequence 471

ACTCACCTAACTTATATTCCTAGTTTATTTAAGTTATATTGTTACATATT
AACAATTACTGATATCTGCTGACTAAATATCTACTACACCTTCTCATACAC
TTCAACACTCCTATATATTATATTGTATCTAGTGTATATTTTATNNAANN
TCAGTTNGGTATGCTGATCGCGTTGCGGGCGNCCGGGCAGGTACTATGGG
TGTAGTGTTACTATTACAGTTAATTCGTCCTTTGTGTGCGCTGATAAATG
CAGTGAGGATTGGAGCACTGTCCACTGAGTCTCTGTGCAACAACTTATCG
GTGTGGCAGGGGTTTCCGGTGTCTGGCTCTGATCTTGGTCGCTGGATAGT
CGTCTGTGTTTTTTTCGGTGCCCAAGGCGACGCTTTGGTATGGGTTCGTG
GCGGGGTGGTTGGCCAAGTGCTGTAATAATTTCAGGAGAGGATACTTT
GTTGCTGCTGCAGGATCAGCCATGGTAGATTATGGTTTTTTGAGAACCAGA
TGGGGCACACAATTTCTAGTGTGCCCATTTAACAGGGTCTTTCAAAGTAC
CATG

>Sequence 473

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TTTAAGAAAGGCCTTTTTTTCATCTTTTATACTATATTCTGTTCTTGGCC TGGGGGGCCTTTTTAAAACTAGTGGATCCCCCCGGGTTGTGGGAATCGTT TTCAGCTTTATTTTACCTTCCACCTTAAGGGGGTGCCCGGCCCCAACTTT GTTCCTT

>Sequence 474

>Sequence 475

GTACGATTGAGCCNTTTTGGAAGCCGCTCTCCCGCGGTGGCGACAGGGTT ACATTGGTAAGGGTGACAGTTAGAAGGGGAAGTCCTTTTAGTGAAATAGA TGAGAGGTTTTAGA

>Sequence 476

TCTCTCTCATCTCCCACTTTTCACTCTATTGTGACTAACACTCTTTTCTT TCATCTTTNATCNCTTGGAGTGGANCTTTGGGAGGCCTNTCCGCGGNGGC TACACGCTAGGAACCTTGCAGCTTACAGTGACAGAGCTCCCATTCACGAG GCCACCACTCATCTCGATTTCTGGATCTCTAGGGAATGAGTAGAGCTCCA CCTGGATTCCCTTTTCCAGTTTCTTATGTCCACAAGTCACTGTGCACAGA TAAGAGTGTTCGTTCTCAAAACTCACAGGGCTCAGGGTCAGCGTGGAATT GGTCCCCTTCACTCCTCACCTTCCCGCTCAGAGGGCTGTCTATCTGGGTT CTCCAGGAGAAAGATGGGGATTCACAGCCCATGACACCTACATGTCAACA TGACTGAGTCTCCAATCTGAGCAGCAATCCGGGGTCCAGGGGAGATCTCA ACAGTAAATGGTTTCTCTTGGACAAATTAATTCCACCTCTTTTCTGGTTT TCCCCAATCAAATTAAACTTCTTCACACCACATTAAATTCCAGAAATCTT CCATCCTTATAACAATTAAAGTGGAGAGTTGGATTTCCAGAAAGGTGCTT GAAATTCCCATAATCTAAATTCTTACTCCAAAAAATTTTGGGAGCTGGAG ACCCTTGCTTGGACCAGGCAATGGTACGGAGCCCCTTTTTGGAAGTTGGG **GGAGGGATCACAGAAATAACN** 

>Sequence 477

>Sequence 478

>Sequence 479

TGCCGATGATCGGAAGCCTNACCGCGGTGGCGGCCGAGGTACGCGGGGGG TGTGGCCTGCATCTCAGCTGGCCGCCATCAGTGTAAATAGAGCTTAAAGT CATGGTTTGGCTGCATAAAAATTTTCTAACTTGGGTTGAATATTTGTAGC

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#### >Sequence 480

#### >Sequence 481

#### >Sequence 482

CTGAGAGATCCCCTCATAATTTCCCCAAAGCGTAACCATGTGTGAATAAA
TTTTGAGCTAGTAGGGTTGCAGCCACGAGTAAGTCTTCCCTTGTTATTGT
GTAGCCAGAATGCCGCAAAACTTCCATGCCTAAGCGAACTGTTGAGAGTA
CGTTTCGATTTCTGACTGTTTAGCCTGGAAGTGCTTGTCCCAACCTTGT
TTCTGAGCATGAACGCCCGCAAGCCAACATGTTAGTTGAAGCATCAGGGC
GATTAGCAGCATGATATCAAAACGCTCTGAGCTGCTCGTTCGGCTATGGC
GTAGGCCTAGTCCGTAGGCAGGACTTTTCAAGTCTCGGAAGGTTTCTTCA
ATCTGCATTCGCTTCGAATAGATATTAACAAGTTGTTTGGGTGTTCGAAT
TTAACAG

#### >Sequence 483

### >Sequence 484

GGAGATGTGAACAATGTGTCATTGCTCTCAAGAGAAGGATGTGGATGGCC TGGACCGCACAGCTGGTGCAATTCGAGGCCGGGCAGCCCGGGTCATTCAC GTAGTCACCTCAGAGATGGACATCGAGCGGCCGCCCGGGCAGGTACACAA

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GCTTTATTGGGCAACAGCAACGAGCCACGCTGGCAAACAATGAAAGTAGA GTCGCTCAGAAACACGAAAGATCATATGTGTGTCATCACAGCATCGAGAA TTTAAATCATCTGGAAGTTCCTGCTAAATTAAAGCATACTGTGCCAGAGC TCCCCTCTAATCAAAAAACGCTGTCCTGGTGAAAATTTGCAATGAGGATT ACAGAGAGAGAGATCAACCAGTGAGGAAATCACAGACTCTTACATGAGTT TACAGTTAACCCCACTGCACAAAATAAATTAGCCATAATTTGGTTTT TTTTGAAAAACCATGCCCCCCACCTGACCCCACAACAACAGGTACTGG CATGCCCAGTTTATTAACAGATGGGCCTAAAACATGCTGGGGCGGAGAGA CAGATTACGGGTAATGCGCTTTGCCCGAGAA

>Sequence 485

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>Sequence 486

>Sequence 487

>Sequence 488

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>Sequence 489

CATTCCCTTTCTTCTTGCATTTATATGTTAGTTTATATATTTTATTATCT **ATGTTTAACTATTTATTTTTATTATGATTTTATTATTTTCTCTATCATAT** TTATTCTATTNNCTGTTTGTTTCTGGATATCATTCCCGTGGTGGCGGCCG ACCGAAACCTGGTGAAGCCCTTTGGGCGATTGGTGATCACCCCTAGATCC GTGAAAGCTGCCTGCCCCCCATCCGGGCAAGCAGGGCCAAGGTGGCATC TTCACATTCCTGGAACCCACCAGTAACAGCAGCAGGTATTTCTTCTGGT AAATGAGAGCCTTTCGAAAACTTTCTGCCCTCAAGTATTTACCATAAATT CTCTTTAAAGTGACATGTTCAGAATCAGGGCTCAGAGTTTGAAGTAAAGA GTCATTTCTTAGTTCAGCTTTCAATTTGTATAACTTTAGCCTCTGCCCTT TTCAAAGATTTTTGGAGAGTCAATTTTTCTTTTGTTCATACTTCTTTTTC AGAGGGCATGTTGGCTTCAATGTTGGGCACCACCATTCAATGAAAACCCT GGAGATTATTCTTACCAGCTTCCTGGCTGGCGATCCAACTGATCTGCCCT TCCAGCTTAATACCCATGTCCTTAAATCATTCTTTTTTCAGTAATTGGCT TGATTTCCCTGGCAGCTTAACATTTTGTTAAAAGTCTTTATTTCATGTGC CCCAAGAGTCCTTTGCCGTTTTAAACTGTTGACCCCCGGCTTGTGAATCG TATAAACCTAAAAATCTGTCCCTT

>Sequence 490

GGGGATATGTCGAGTCTCCCGCGGTGGCGGCCGAGGTACCTGATTTTATT
TCCAGTTTTCATCCGAATCCACTGGGGAATGGGACGATTTTGCTTTTGTT
TCTTGGCCAGGAATCGCTTAATCCTGAAAGTCTTGTGAGAAGACA

>Sequence 492

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>Sequence 494
TTAATTTGATCGAGTCCACCGCGGTGGCGGCCGAGGTACTCATGGTTGCT
GTAAATTAGGCAGCCGTTCTGCAGGGTTTTTGCTTAGCCAGGCTCCTCTGA
GATCTGGCTATTCTGTCTTGTGGATTTTCAGTCCCCGCGTACCTGCCCGG
GCGGTTCGAGCGGTCGTCCGGTCAGGTACATATACATTATGTAATTAAAA
AGCGTGCATGTTTATGTATTAAAAATAATTGGATTTAAACAAAATATTATA
TATACATTATAACACCTAAACGCATAGGCTGTTGTTATTCACAATAGTTA
TACCAATATTATTAATGATGTGTATGAAGACACAATACAAAGCTGGAGGA
AGTATTTAATAGGTATACTCAACTAATACACATAAATTCTAAGCAATAAA
GTACGCAAATTATGTTTTTGGATGAATTTTCAAAATTTGTCATAATAGAC
TTATATTCAGTTAAAACTTGTATAAATTTTTGGAATTTTAAACTTGTGACA
AAAACTTTTTGTGAAAATGTTTCTATTAAATTTAT

>Sequence 495

>Sequence 496

>Sequence 497

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CAAGCTTTTTTTTGGTTTCCCCCTTATATAGGTTGGAGGGGGGTTTAAAA TTTGGTCGGCGGCTTTTGGGCCCGTAAAATTCAATGGGGTTCCCATAAGG CCTGTGTTTTTCCCTTGGGTGGTTGAAAAAATTATGGTATATATCNCCGC TTTCAACCAAATTTTCCCTACAAACAG

>Sequence 498

>Sequence 499

>Sequence 500

TCTCTTGATCTTCGCTTTGACCGCATATCTTATTCTGCTTATTATCTTAC
TCTAATACTATTACCTTATTATACTATCTAACTG

>Sequence 501

CTCCGCCTTCTATTATACATTGTTATTTGATTGTTATCTGATATGTTTTG
TAATGCTCTTCGCACTCTATCCAGATATATTTA

>Sequence 502

>Sequence 503

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>Sequence 504

>Sequence 505

>Sequence 506

CACTACCTGCTATCGTCCTTGNCTACNTGTATCGTCAGTATCTACATCTA TCTNGACATCTATACAGCTTATNTATCGGTTCGTGTANANCTATNGTATC TGTACTGTGTCAGTCGATATCTCACATCCGCGATATCGTTTCTGTATT ACGTCTCTCTGTCTGTATTCATCGTATGTGATATTATANTNATAATCATA ATGATTTTAGACTCACCGCGGTGGCGGCCGCCCGGGCAGGTACTCGTCTT GGTGAGAGCGTGAGCTGCTGAGATTTGGGAGTCTGCGCTAGGCCCGCTTG GAGTTCTGAGCCGATGGAAGAGTTCACTCATGTTTGCACCCGCGGTGATG CGTGCTTTTCGCAAGAACAAGACTCTTGGCTATGGAGTCCCCATGTTGAT GGATCCTGAGCTTGAAAAAACTGAAAGAGAATAAAATATCTTTAGAGTC GGAATATGAGAAAATCAAAGACTCCAAGTTTGATGACTGGAAGAATATTC GAGGACCCAGGCCTTGGGAAGATCCTGACCTTCTTCAAGGAAGAAATCCA GAAAGCCTTAAGACTAAGACAACTTGACTCTGCTGATTCTTTTTTCCTTT TTTTTTTTTAAATAAAAATATTATTAACTGGACCTCCTAATATATACT TCTATCAAGTGGAAAGGAAATTCCCGGCCCATGGAAACTTGGATATGGGT AATTTGATGAACAAAATCTTTACTTAAAGGCAAGGTTCCTTGGCCGTG >Sequence 507

CACTCACCGTCGCTATTCTTTGCTCTGTTATTAAATGAGGTTCAATCTAC GTCACATTCTTATTTAATTTACTATATTATTTCTTACATTTTATTCATAT ATAACTCATTTCTTATCTNTTCTCAAGTTTGATGTACGGGTGGCGGCCGC CCGGGCAGGTACGCGGAAATCCCCTAACTTCCTTGCTATCTTCCCATCCC GGTTGCTACGCACATGTGACTGATACTTGTAATACACTAAATTGAAGTAT TTTTCATTTTAGGACTTCTCTAATTCATAATGATGTATTCCAGTTTCTCT ACAAGCTTTGGCTATTTAGTATATCTTAGCTACTTAAACATTTCTAGAAT TCTCTGGACATGGTTTTTCTCTGGTGCGAATATAAAGGTCAAGGCCTCT TTACCAAGTTCTAAGCCAGCTCCTTTTTAAGCCTACGTCTATGTAAACCC AGTTTAATAATCTAATCATAACAAGGCAAGGACGCCCTTTTAACGGTTGG TATATTTTTTAGTTGAACTCCTAAATAACAATGGATACCTTCCAGCGAGT TTTTCTCAGAAAATTCCCTCTAACCACAATGGAAATTAGGTGGGGGAAGG TTGAACTTAAAAGAATAACTTGGAGGAAAAGGGTTATGAAATTTCAGAAA TTATGGGTGGTTTAATATTTCTTCGTCCAAAAATATTTCTTATTCCTAGG GTGGCCATGAATTTTACCCCTTAAAAGGACCTACCAACCCATTTAGTGAA ATAAATTGGAGCGGGATGTGTTAACCACATTGATTGTCAATAAAACAGGA TACAATCT

>Sequence 508

CTCGCTCCTTTATCTTCTTATTTTATCGATGTGATTGTATTTATCTTACT

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**TATCGTTGTA** 

>Sequence 509

AATTGGAGCTCCACCGGTGGNCGGCCGAGGTACACTCCCACGACCACGG CATGGTCTCTTTCATATGGCTCAANNNTCAACTGGGCCGTGGGGGGGTTA TATTCTACTNTTNCATCTTTTTCACTTCNNANGCAAACACNNCCTCNNCT TANNCTTTNNANTCAATNCANTTNNCCTTAATNNAAATCACAAANTNTCC TCCATTACNCANNAANNTNTNNNCATTCANNNCCACAATCCGGGGGGGG GGTNNCTNGGCCACATCANCAAAAATCACATCCACCATTGCNATCCCNCN TACCTGCCCG

>Sequence 510

ATTGGAGCTCCCGCGGTGGCGCCGCCCGGGCAGGTACTCTCTGAGCCA
AGGACATTCTCATTTAAACAGTTTAAANAGGCGGGGTGCGGGAGGCGGAA
AAAAAGAAATATACCCTGGCAGCGCTGCCGGCCGGAAAGCGGAGAGGGAC
GCTAAGATCAGCAAATTCGCCAGTTTGGATCCTTGTCCTTTTCCGCCCTT
TTCCCCCCATTAAATCCAGAACCCGTCACATGATAATTAAGAGGGGGCGG
CAGTTCCGGCTGCTCAAACGACTGCGGTAGAGGATCCCCCGCGTACCT
>Sequence 511

>Sequence 512

**TGCGT** 

>Sequence 513

>Sequence 514

GCGATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCTCCGAAA
TCTTACCTTCAGTCTTCTCTGCCACCCAGTCATTTATATGCTTCCTGCAC
TCTTCAGTGTCTTCAGCAAAGGACAACTCCTCCAGCTCTGCCTGATAGAA
CTTCTGACAGTATTCTTTAAAGTCTGGAAGGAAATCACACGTCTTTTCTC
CAAAGAGTCTGTTGGCAGTTCTAAGCAAGTACGCGGGGTAAGCAGGAAGT
GAAACCACAGAGCTTCAAAAAAAAGAGCGGGACAGGGACAAGCGTATCTAA
GAGGCTGAACATGAATCCACAGATCAGAAATCCGATGGAGCGGATGTATC
GAGACACATTCTACGACAACTTTGAAAACGAACCCATCCTCTATGGTCGG
AGCTACACTTGGCTGTGCTATGAAGTGAAAATAAAGAGGGGCCGCTCAAA
TCTCCTTTGGGACACACGGGTCTTTCGAGGCCAGGTGTATTTCGAGCCTC
AGTACCT

>Sequence 515

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>Sequence 516

>Sequence 517

AGGTACGCGGGTGTTGATCCAGTTCTTGCTTTTCAACGAGAAGGATTTGG ACGTCAGAGTATGTCAGAAAAACGCACAAAGCAATTTTCAGATGCCAGTC AATTGGATTTCGTTAAAACACGAAAATCAAAAAGCATGGATTTAGTAGCT GACGAGACTAAACTCAATACAGTGGATGACTAGAAAGCAGGTTCTCCCAG CAGAGATGTGGGTCCTTCCCTGGGTCTGAAGAAGTCAAGCTCATTGGAGA GTCTGCAGACCGCAGTTGCCGAGGTGACTTTGAATGGGGATATTCCTTTC CATCGTCCA

>Sequence 518

>Sequence 519

TCCCTCCCCAGGGATCCCGGTTTCGAAGGTGCGCTTTGCCTCCGTTTAA
ATAACTCAAGGGGGGAGACGGTTTTCCCGGAGTCGGGTTTACCCTTGAAG
ACGTGTAGCGAAATCCCCCAAAAGGCGGGAACCCAAAAAAGAACCGTTGT
TCGAGGGTTCCATAGGN

>Sequence 520

GGAGCTCACCGCGGTGGCGGCCGCCCGGGCAGGTACTATGTTGAATAAAT

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#### >Sequence 521

### >Sequence 522

TTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGGGAGTGA GAGGGAACGAGAGTAAGAGAAAGAAGAAGTGAGGGGATGTAAACTCGAA TAAATTTCAAAGTGCCTCCGAGGGATGCAACGGGCAAAAACTGAACTGTT CAGGCTTCAGATTGTAACTGACGATCTGAGGAAAAATGAGGTTTGTGTGA TTTTGCTAAAATGCATCACCAACAGCGAATGGCTGCCTTAGGGACGACA AAGAGCTGAGTGATTTACTGGATTTCAGTGCGATGTTTTCACCTCCTGTG AGCAGTGGGAAAAATGGACCAACTTCTTTGGCAAGTGGACATTTTACTGG CTCAAATGTAGAAGACAGAAGTAGCTCAGGGTCCTGGGGGAATGGAGGAC ATCCAAGCCCGTCCAGGA

#### >Sequence 524

AGGTACGCGGGGCTCTTGAGGAGTGAGACTGCAGGAGATGTGGGCCGTGC
CAAAGAGATGATGAGACTGTTGCTGAGTTCATCAAGAGGACCATCTTGA
AAATCCCCATGAATGAACTGACAACAATCCTGAAGGCCTGGGATTTTTTG
TCTGAAAATCAACTGCAGACTGTAAATTTCCGACAGAGAAAGGAATCTGT
AGTTCAGCACTTGATCCATCTGTGTGAGGAAAAGCGTGCAAGTATCAGTG
ATGCTGCCCTGTTAGACATCATTTGTAAGTGCTGGAGTGCAGTAACGCCA
TCTCAGCTCACCGCGACCTCTGCCTCCTGGATTCAAGTGATTCTCCAACC
TTAGCCTCCCGAGTAGCTGGGACTATAGCAGTGCACCACCATATATGCAA
TTTCAT

#### >Sequence 525

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TGTGGGGGTGTNCTTGNGGGACCACACATCTTTCCTTCTGGTGGGCAAC
ATTCACCTGGGCTGAGCGAATGGCACCTCANTGCACAGAGAGGTGGCTT
CTGAGGACCCAGCTTCCCTCCCAAAGAGTGGATCATTTCCTTGTTCAAA
GATCCAGGGACCCTGACCGTTCCTACCTTTTTGCTGAAGAGATTTATGAC
CGGCAAGGTGGAGCCCCTGGGGCCTGGAATGAGCCTCTCCTGAAACACTG
GGGCCCGGAATTCCACGCCCCTTGGCGCAGGTCACACAGCCCCGGGTCC
TTCGCCCCTGGGTTGGCTTAGGGCCTCCTGGCATTCTGGAGGGGCCCTAT
TCTAATACCAGCCCTCATCAAATTGGGGCTACAACCCCAAGGCCCTCTGG
ATC

>Sequence 526 GCGATTGGAGCACTACGCGGTGGCGGTTGAGGGACATGACATGCCACCAG TAAAACTTAATGTCTTCCTTTTTTTTCTCACTGGGTTTTTCATAGATCGA GACATGTAAGCAGCATCATGGAGGTAAGTTTTTGACCTTGAGAAAATGTT TTTGTTTCACTGTCCTGAGGACTATTTATAGACAGCTCTAACATGATAAC GAATCCTACAGGGTCATGTTCCCTTCTCCTGTGGAGTGGGGGGGAAGGT GTATGGCCCCAGGGATGGCCATATTACTGACCCTCTACAGAGAGGGCAAA GGAACTGCCAGTATGGTATTGCAGGATAAAGGCAGGTGGTTACCCACATT ACCTGCAAGGCTTTGATCTTTCTTCTGCCATTTCCACATTGGACATCTCT GCTGAGGAGAAAATGAACCACTCTTTTCCCTTTGATAATGGGGGTTTA TTCTTTAGACAGAAGAGGAGTTATACAGCTCTGGAAACATCCCATTCC TGTATGGGGACTGTGTTTGCCTTTTAGAGGTCCCAAGCCCATAGAGGAGA AACTACAAGGGGCTCGAACCCAGAGAGAGGGGGGGACTTTGCTT >Sequence 527

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>Sequence 528

**AACATGGAGNCACCA** 

>Sequence 530

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>Sequence 531

NTTACATCNGACNTTTCAANCNNCCTTTGNGANCTTTCTGCCCCCCCAA GACAGNAATAAGGANTNNNAAAAAAACAATTTCCACCCGACAGTAGNCACC TTTACACNGAGGANAACGGGAACTTTATTTAAAGGATATTGTCTCATTTC TAACACNCNGNAANCCANCCTTCCCTGATAATAAATCACTGGAGAACAAA AGCGAATAACAGCAGGTCTCTCTTTTTTATTCCAATTTCTTACATTTATT GCCAATGAAGAATTCAAATGCCAAGGGCCCTGCCTAGAAAGCCACTCTAA AGCAACAAAGAGGTCTGCCAATTCGCTTAAAAAACAAACCCCCCAAGAGAA AAAAAATTCAAAAACCCTTATTTAAATGAAACAAGCAAACTGGGGCCCCC CTAACCCTTCCTTCAATATAAAGAGACCCCGCCCCCGGGNNNCCAAATCA AAAAAAACACACCTTTACAATCACTCATACTGAATCACACATATCTAAC CAATTACTTCATAATTACGACACACCACATATTCACCCACACAGGTGTAT CATAATCAACATCCACAACTCATCACAACAACACTTAAAATGTTCAACA AATATAACTACCACACCTAATACACCAAGCTTGTACTACACTCATATAAA CAAATCTCGTAACACTCACTTATACTCTACAACTACTCTCATTTCACTTA ATCATACACAACGTATACTACTTCAATAGAACTANACTCACCAATCTTCC **ATAACTACACGCCG** 

>Sequence 532

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GGGAGNGNGATATTTTTTTATTCAATTCGCGATTGACAGNNNAGATCAA
AATGTTATTAACACTCTTAGAAGACTGGTTTGTTCATTTGACATTGGGAC
GTGCACCAATTTTTATTACAAAAATCAAAAAAGTAAAAATTATTACAATA
TTTGCAGAGTATAACCACTAGTTGCCTAGACAAAAGCTAATTTCTACAAA
ATCAAAAACTTAATGCAGTTTTATTAAGAGAGTCAAAATTCTCTCAGTTA
ACTGGATATACATAGTGGTATATATCTTAAAGCAGAAAACCCCAAAAAAC
AAAAACAAGGAAAAAAGAAAATACATGTCAACAGTCAGTTAAATATTTTG
ACCTGACAGTTTCTACAAATAGTGATTTTCACTACATATAAAGGAATCTG
TTACATGTGGTAAAACTTCCAGAAACCAAGTAGGAAGTGTGGAATAAAAA
CAATAAATTCAAACGCAGCCCCAGGCTGGGCCTGTTTTTCATGAAGCCCA
AGACAGTGATCTTTATTATTAAGGAGGGACCACTGTGTCCACAACTAAAA
ACCTTCAACCACATGGTGATCTGCAAAGCTTTATTTTGAAAAAAACA
TTCTTTTCTCACACAAATCAATGCAAGAAATTTTTTTTAAAGGCTTGTACC
TTCCCGGGCCGGCCGTTTTTTTAAAAAAAACCTTTAAAAT

>Sequence 533

GGTGTAGGGGCACTACCGCGGNNGGTTTTCGAAGNACGATCANNCCCCCA GCNGCNNGCCNGCAAAGANGAGCCGCTGCGAGACGGGTTTANTCGCNNCC CTACCCNGGANCNNGGCCNNACATNNNCGATTGNGNCACNGGGCGCCACC NCACGGGAGAAGGNCNNGCCGGNAAGGGNNNNCACGAAGANCNGCANNNN GACCNGNNAGCGGANACCAGGATTTTTCCAATTTTTTTTTCACGTTTCC CACAGGGACACAACAAGCTCACCCAACAAAGCCAACCGCCCCTGCCCGC GTACCTGCCCGTTCTT

>Sequence 534

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**GCAAGCACTAGAGGC** 

>Sequence 535

NGACTTTGAGGCAACTCNCGCGCNNGGCGCTGCGNCGGNGNCACGACGCG CCNGGGCAAAGGGAAGNAACAGACACACGTTTGNGNGGAAGGATGTAACC CGGGACCAGAGGCNCAGNGGNGGGAGAGANCCCNGCATTACCCACCAACC AGAACGNGGCCCGCCAGAGGCNNGAACNGAGAGAAAGANNCNGGGGCNGN CNAANGAAANANAGACANNCNCACANAAGCCTTGTNCATTTTCTTTNCC GGCGTGACCGNCCACCGCAGAAACANNNCACAANAGGCNGCCGGNNCAAA CGGGGGGGAGCACGGACTGTCAGNNCNCNGGGAAGGGGNCAGCGCANCCG GCAGGGCNNCNCCCCCGGNCNNNGGGAGAACCAGGGCTCNNCNCAGGG GCCCCAGGGACGCCAGGCNGNNCCAGCCAGGAAGGCCAAAANCAAGAGG GAGANGNAGAAAGGAAAAAAAGGAAAAAGGGGAGNNGGNGAANCGGNN GNNCCNNCCCCACAANNGGANGANNGGCANAAAGGGNNNAGCANGNCCCN CCNNNCCNCACCCCCCCNNGGNCNCCAATAAACAAGAGAAACNCCAAAG GAANGGGGAGGCCGAACCCACAGGCGGAGAACCCGGCACCCCCAAGCAN NCAAGAAAAGGCGCCCCAAAAACAACAACCCCCCCAAGGG >Sequence 536

GGCTTTGAGGCACTCCGCGGNGGCCCTCGNCGNGCTTCTCAGCCAGANAC GNACAGCCNGAGAGTNGCTGGNAGACTCTTTTANCANCCGCCCGCCACNA TCCATCCATCNGCTCATCCTTTCTCCATCTGCTCAACAACGCTAGAGAA TCAATCCTTGTGTCAGATACTGGGGCTGCCCTCAAGGAGCTTTTATAGAG TTCAGGGNACCTTTTTCGCTCTTTTTT

>Sequence 537

GGCTTTGNGCNACTCCGCGGNGGCCCTCGCAGTANNATCGNGGCCC

>Sequence 538

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AGAAAATCTGAGACACGTGAGGCCAGACAAAGCAAGGCCGGGGCTGATGG GTTTATTCTGATTGATTTTTTTTCTTGGTTTCTGGATAAACCACCCTCTG AAAAAAAAGGGCCCCGGGCC

>Sequence 540

Section 18 CCGGGCAGGTACTTTATTTGCTAAAAAAATGCTAATGATATCCAAACCAT CAGCTACTTGTAATCTTTTTGCTGGTGGAGGGTTTTGTCTCAATTTTGGT GGCTGCTGACTGATCAGCGTGGTGGTTGCTGAAGGTTGGAGTGGTTGTGG CAATTTCTTAAAATAAGACAACAGGCTGGGTATATTGCCTCATACCTGTA AATCCCAGCACTTTGGGAGGCTGAGGTGGGAGAATCTTTTGAGGCCAGGA GTTTAAGACCGGCCTGNGCAACATGGTGAGACCGTGTGTCTGCAGAAAAT GAAAAGAAATTGGCTGAGTGTGGTGCTGCCTATACTACCATCTACT AGGGAGGGTAGGATGGAAGGTTTGCTTGAGCCCAGGAATTCAAGGTTGTG

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>Sequence 541

>Sequence 542

>Sequence 543

GGACACACCATGCACGCAAAACAAATTGCAATAATGTGATAAGTTCTTTA
AAAGAGGTAAGAGCAACGTGCTTTGGGAGCAGAGAAGAGGGAGAAAGCAG
CATCTTGCCTGGATGAGCCAGGGGACACAGAAGAAGAAGCCCACTATCTCA
TTTAATCTTTACAACTCTCTTGCAAGGTTCCCTGGTTGTGAAAATACATG
AGATGAATCATGAAGGCCACTATCATCCTCCTTCTGCTTGCACAAGTTTC
CTGGGCTGGACCGTTTCAACAGAGAGGCTTATTTGACTTTATGCTAGAAG
ATGAGGCTTCTGGGATAGGCCCAGAAGTTCCTGATGACCGCGACTTCGAG
CCCTCCCTATGCCCAGTGTGCCCCTTCCGCTGTCAATGCCATCTTTAAAT
GGTCCAATGTTCTGATTTGGGTCTGGACAAAGTGCCAAT

>Sequence 544

>Sequence 545

ATTTGTTATACCGCGTCACCAATTTCCAACACAAACTATACCGAAGCCCG
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ACATGCGCGCGCCTTTTTCCCAGTTTCGGGGGAAAAACACTTGTTTCGGT
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TTTTCCGGCTTTTCCCTTCGGCGTCAACTTTGAACTTTCCGCTTGTCGCC
TTCGGGTTCGGTTTACCGGCTTGCCGGGCCGAGGACCGGGTAATTTCAGG

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**CTTCG** 

>Sequence 546

>Sequence 547

>Sequence 548

>Sequence 549

>Sequence 550

ACGTGGTTACCGCCGTGCGTGCGCGAGGACTACACGATGATCGGTGATTG TGCTCATGGGTACCCAGCTGCACCCATGAACTACGCCGAGAGACTGTTTT AGGCTGTGAGGGACTCAACCGTTATACTGAATGGAGAGCGGGACCACATA

> Page 172 (of 261 pages in Table 2)

>Sequence 551

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TTTTTAAATTACGTTCGTTAGTTATGTAATATATGGTAGTTGCGTGGTTT
ATTATTTTTTTTTAGAGATGAGACGAGTGGCCGGCCGCCCGGGCAGGTACT
ACAATGATTCTGAAGCACAGTGTATTCAGACAGATACAGTGAACCAAGTG
CAATATGTAAGGATGAAAGAAGAAGAAGAAGAAATCCAAGTAAAT
GCCTTGTCTTTGCAAATGTTTTTATATTAAATCATAAGGGAAGGGAACTA
CTGCCTTAAATGTTATCAAAAGAGTTTTCTAACAAGGTTAATACCTTAGT
TCTTAACATTTTTTTTCTTTATGTGTAGTGTTTTTCATGCTACCTTGGTAG
GAAACTTATTTACAAACCATATTAAAAGGCTAATTTAAATATAATA
TAAAGTGCTCTGAATAAAGCAGAAATATATTACAGTTCATTCCACAGAAA
GGCATTCCAAACCACCCAAATGACCAAGGCATATATAGTATTTGGAGGAA
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>Sequence 553

GAGATGACCCGGGTGGCGGCCGAGGTACCCATCTCTGCCCATCACCGCTG
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GTGCTTCCTTACTTCGAGCGGCCGCCCGGCAGGGACTTCACACCAAACA
CTAGCTCAAGCACTGACGTTATTCTACAGGACTATGAACCTTCATATCCA
CATTTACAGTCCGGACAGATAAAGGAAAACACCCAAATCCAGGAGGCAA
TATAAAAGGAAGAGAACAAAACACACATTCATACACTCACACTTAAAAAT
AGGGGAAGACCAACAGGGGAACTTTCGTTCTCTTCTGGATGTCTACTTAA
AAATCCCATGTGGTACCT

>Sequence 554

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>Sequence 556

>Sequence 557
TGAGATGCTCCGGGTGGCGGCCGAGGTACTGGATGTCAGGTCTGCGAAAC
TTCTTAGATTTTGACCTCAGTCCATAAACCACACTATCACCTCGGCCATC
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GGTCCGTGGGAAAATCAGTGACCAGTTCATCAGATTCATCAGAATGGTGA
GACTCATCAGACTGGTGAGAATCATCAGTGTCATCACA

>Sequence 558

>Sequence 559

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GGGTTCGTGCGCCTTCTACCTCGCTGTTTCGGTTTTCCTGGCTCCTCGGC
CCTTTTCTCCCCTGTTGCAGCTGGGAGCGGACGAAGCGCGAAGCTGGGAT
TTTTTACTGTCTCCTGAAGAATTTAACACAAACATGGATATCAGACCAAA
TCATACAATTTATACAACAATATGAATGACAAAAATTAAAAAAGGAAGAAT
TGAAGAGATCCCTATATGCCCTGTTTTCTCAATTTGGTCATGTGGTGGAC
ATTGTGGCTTTAAAGACCCTTGAAGAAGAGGGGGGCAGGCCTTTTGGCC
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>Sequence 560

>Sequence 561

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TAATACTTTTGACACTTGCTGTCTCTAGTTTCTAATATTTATATTATAAAC

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ATGACATTGATCTATAATTTTGTCTTTTATTTTANANANATATTTGCGAT
GGCTCCCCGGGTGGCGGGCGAGGTACCATGTGGGAAGCGCTGTGAAGAGT
TGTTGCCTTTCAAGATATACCCAAATTCCCAGTTCCAGCCCGTGTCATTA
AAACTCCGCTGGCGTGAAAGATGACGTCCTTAGCCCAGCAGCTGCAACGA
CTCGCCCTCCCTCAAAGGGATGCCAGCCTTTTATTTAGAGATGAAGTTGC
TTCTTTGTTATTTGACCCTAAGGAAGCGGCCACAATTGACAGGGACACCG
TCTTCGCCATTGGTGAGCCATCTTTTAACTTAGAAAAGCTCTTGGAAGCG
TTTGTTTTCTGGATGTTACTGTTTTTTTTCCCCCCCTGTTTTCTCTTCTG
TACCCGTGCTCTTCCTTAACAGTTTCTGCATGTTGATGTATATTTTCAAG
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>Sequence 562

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AGGTTCAGTAGGGTGTGCCGAAAAACCCCCGTACCAGGGAACTATTTAAA
TGGATACCCAGGGCCGTTTTCCCCCCTTGGTAAGCTTCCCCTTCGTTGCG
GCTTCTTCCCTTGTTTCCGAACCCCTTGCCCGGCTTTTACCCGGAATAACC
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TCTTCATTAGCCTCACG

>Sequence 563

>Sequence 564

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>Sequence 556 -

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GGATGCCATTAAGTATTTCAAGGAAAAAGTGAGCACACAGAATCTGCTAC
TCCTGCTGACTG

>Sequence 567

>Sequence 568

>Sequence 569

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GCAACACCGCAGAACNCNGAAGGCNGAGAACACAAGNCAAANACANNNAA
CNNAAAAACAACGCNGAGAGAACACNGGGAAAAATTTCTTTTTTTAGATG
TCCACAAAAAAGGACATGTAAAGGGGAAGGTCAAGTTGTTGAGACAGCTA
CTTTATTCTTGGGATGACTGNGGAGGTGGTGGAGATGAGCCTTGTTTGCC
AGATTTCCGTTCGTAGTTCACGAGTCGTTGACCCACAAGGTACCTGCCCG
>Sequence 570

>Sequence 571

>Sequence 572

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>Sequence 573

- >Sequence 574
- >Sequence 575
- >Sequence 576

NGCGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACGCGGGGTAGGAGCC TCTCTCCCTACTGCTGCTACACAAGACCCTGAGACTGACCTGCAGGACGA AACCATGAAGAGCCTGATCCTTCTTGCCATCC

>Sequence 577

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AGCTCGGCGAGCGAGGGGGCGCGCGCGCGTTGGAGAGCGACGGCGCCCC
CGCGTAAGCAGTGGTAACAACGCAGAGTAACGCGGGAATGAAGAATCTTA
GGCGGGTGCACCCAGTTTCCACCATGATTAAGGGTCTTTACGGAATAAAG
GATGATGTCTTCCTTAGTGTTCCTTGCATTTTTGGGACAGAATGGAATCTC
AGACCTTGTGAAGGTGACTCTGACTTCTGAGGAAGAGGCCCGTTTGAAGA
AGAGTGCAGATACACTTTGGGGGATCCAAAAGGAGCTGCAATTTTAAAGT
CTTCTGATGTCATATCATTTCACTGTCTAGGCTACAACC

>Sequence 578

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GTCCTCACAGTCCTGATAATCTGGTTCTTCCCGAAACTCCCAAATATCTA
TGGAGAGCTGTTCTAGCTTTTTGCACAGGGAACCAGTGGACAGAGGTATCA
TTAAACATGTCCATGTATTGCGAAGTCTGAGGAAACTCAAGCTCCTCCAG
TCCTTTTAAAATCTTTGCAATGTAGGGATAATTTTTCTGCAGAATCCTTG
CCAACAACCTCTCCTCAAGTCCTTTGAAACTGTTCCCAATGATGACCATC
TTAGAAAGGGCATCTACTGACCAGTTACTCCATAAAAGATTGTTGTACCT
CGGCCGCTCTAGAN

>Sequence 579

>Sequence 580

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CTTTTTCTTCCTCCAGTTTTAGTTTGCTTTTATTAAAAAAAGAAAATAGT
GCATGGCCATAGCTCCTTCAGTTCTCTTATTGCAGACTAACCATCAGGAT
GGTATCAAAGCACAAATACTTTGGAGGGGAATGCGTTGAACTGGGGCAAG
TACCTGCCCG

>Sequence 581

CACTCGGCACTCTCGGTTCTCTGCTATTTTAATTGTATTTTGTATAATAA

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CAATACGTATTTTACTACATTCCTTTAATGTACATAGATATCATATACTT ATTTATTCATTAANTTATATTATGGTTTAGTAGTGAGCTC

>Sequence 582

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ACCTATTTTGGATGAGGTAAAAGACATGTGCTCATCTCCAATTACAGTTT
CAAGCTGCTGTCGGCCAACCCTATCAGCGGGGAGGCCACAAAGCATAAGA
ATTCTTTTGGGATTACACTGACATCAATAATTTTTATCACTATCTTCCAT
TACACTATTGTGCACATTAAGCCAATTTTCTGATCATCACATACTTGTTG
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>Sequence 583

GCGCTAGGAGTACTCGCGGNGGCGGTTAGGGCTCTACCGGACCNCNGACC
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GNCGGACCACANGAGNCAAACTTAGGNCNAGCNCAGAGAAAGCCCGAGAC
AGCAGGGCAAAAGCGGCNNGCGCCCCGGNNGGAACANCGCCAGCCNCCTC
ANANCCANNNCCAGACAAGCTTTCATTTTTTTTTCAAATCCGACATCTA
CTCCAACTACATGATACACTAAAGTGCTTGCTGTGTGGGCTTCCAGGGGA
GATGAAATGGTAAGTCGGGCTGCAGCATCTCTTTCAAAATATACACCAA
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>Sequence 584

>Sequence 585

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>Sequence 586

>Sequence 587

>Sequence 588

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Page 178 (of 261 pages in Table 2)

GNNCGGGACAAGAACCGNGAAGGGTTGATGGACAGGGAAGAGACCAACGA CTGGATCCTTCCCTCAGACTATGATCATGCAGAGGCAGAAGCCAGGCACC TGGTCTATGAATCAGACCAAATCAAGGTTTTTTTTGCTGTCCAAGGAGGAG ATCGCTGACAAGTATGACTTATTTGTTGGCAGCCAGGCCGCAGATTTTGG GGAGGCCTTAGTACCT

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>Sequence 591

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ATTCCACCTGTATTTCTTAACTTGCCAGAGCTGAGTCTCATGGCCACCCT
TAGCAGGAGTTGGGGAGGTATTTTTTAACAAGGCACATTATCATCTCCCCC
ACCCAAAGTGGAGCTATTGCTAATGAAAAAGATACAATGAGATGTTTATG
AAATTATCTGTAGCTATTAATGTCAGGTTTTTTGAAATTTACTGACCTGGA
AGAATACTCATAATGCAATGTCAAGTGAGAAGCAGGACAAAGAACATTTG
CAATACAGTT

>Sequence 592

>Sequence 593

>Sequence 594

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TTAAAGATGAAAAGGCTTTGTCGAGCGGCCGCCCGGGCAGGTACTTTNTT
TTTTTTTTTTTTTTTTTAAGGAGCTTTTATTGTTTTAGTAATCTTAAC
ATAACTTAAAATAAGAGAGGGGAAATGACATCTGGAGATCTAGGTATGTG
GCCCATTGCAATTGAGCACATTTCTTGGGTCTGTTTCTCTATCTCTAAGG
GCAGTCTCAAAACCCCAGCTCAAAATACGACACTAACATGATGAACATGC
ATGAGCTTTGAAAAGTGCTCTGTAGTCTTATGATGATCTAGAAGAGCACT
GTCCAATAGAACTTTCTGTGATGATGAAAAGATTCTACTTTTGACCTATT
CAATANGGTAACCACTTATCA

>Sequence 595

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>Sequence 596

>Sequence 597

>Sequence 598

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>Sequence 599

>Sequence 600

>Sequence 601

>Sequence 602

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CATGTACCTCATACTGTATCTATAATTCTCACGTATCAATGATCTAATAC
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CACCCTCATCTGCGTGGGCGGCCAAGATCGGAGCAGCGACGCTGCGGGCT
ACCCCCATGCCACCCATGACCTGTAGGGACCACCTCTAGATGCCTACTCG
ACTCAAGGACAACACCCATGTCTCCGCTCGATCTGGCCAAGCTGAACCA
GGTGGCAAGACAACAGTCTCACTTTGCCATGACGCACGGCGGGACCGGAT
TCGCCGGAATTGACTCCAGCTCTCCAGAGGTGAAAGGCTATTGGGCAAGT
TTTGGATGCATCTACTCAAACCACCCATGAACTCACCATTTTCCAAAAAAC
TTAATTGGCTGCATAAATCGGGCGCCCAAGGCCGCCAACATTTAAAGAGAA
CCCGCCAGATGTTCCGGGGGCCCAGGATCAAAAAAGCCAAACCCCAGGGG
AAGGGCTCCTCTGGAAGGGCCGGGTACAAAAAACCTGGCTCTTGCTGGCAA
TATTAGATCTGGCCCAAGTATTCTAAATAAAGGCGGCGCTTTTCCTTGA
AAAAGGCATGGGGGGCCGACTAAG

>Sequence 603

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>Sequence 604

>Sequence 605

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>Sequence 607

>Sequence 608

TGAGAGTGGTTGAGCTCACCGCGGTGGCGGCCGAGGTATGCGGGAGCTGA GAGAACAGACACAGACCTGTCGGAAGGTCCTCTGCAGGTCCCCCTTCCGC TCTGCCGATCGACTTCCGCCTCGGGCAGTCAACATACTGCCAAGGAAATC

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TGATGTGGAAAGGAAAATAGAAATAGTGCAGTTTGCTAGCCGGACACGCC
AACTCTTCGTTCGATTATTAGCTTTAGTGAAATGGGCTAATAATGCTGGC
AAAGTGGAAAAATGTGCGATGATTTCAAGCTTTTTAGATCAGCAAGCCAT
CCTGTTTGTGGACACTGCTGATCGCCTGGCCTCGTTAGCTAGAGATGCTC
TGGTCCATGCACGCCTGCCTAGTTTTGCCATCCCATATGCCATTGATGTA
CCTGCCCG

>Sequence 609

>Sequence 610

>Sequence 611

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>Sequence 613

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AAGNCCACTTTGANGAGGCCATCAAAACGAACGGTTATACCCCNCCCACA
NNNCACNCNGAGGGGANGTTTTACAAGNNCACCCGGGNCCCCGCCTGGGG
AAAGGAAAGCTAACTCCACGTCTGTTCCAAAGGCCTCTGCTGGTATTTAC
TTTACGAGAGGCCCACCTTATCCAAAGAGCTATATGCCCTGGGGGGCCTT
GATGGGCTTCACACAGTACCTGCCCC

>Sequence 614

>Sequence 615

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NTTTTTTTTTTTTTTTAATTTTCCATGTATTGGCCTTAATCAAACTAT
AAGCTGTGGAGTGGCCAATATACTCCATTGTGATTATACACTGATTTCCA
TCACCTGCCTTTGTACTATCAACTCTTATTAGATTAAAAGGAAATAGACT
GAAATTGGGAGNGAGGTCAGCGGCTGGCTGGATAAGATGTTGGGCTCAGA
AGAATGTATGTGAAAGACACCAAAGGCCTCTCCTGTATGGACACAAAATC
ATATAACCACTGTGTCTGAGCTGGGTTGTGGATAGTCTTATTTGGCAGAG
GGGGATAGCCATTATATTCTATGAACCTTGCCAGCTGTACCT
>Sequence 616

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TCCCTTGGAACTGGAAACATAAAAAAGGATGCGAATTGGTGGTGGTAAACT
GGGTATTTGGAGTTATATAAGGTTCCCAAAAAGGCATATTCCTTTCAAAA
TTTTCAAAATAAAGAATTTTTTTTTACTGGATTTTAAATGGGGGTGTGCCA
ACTCATTAAAGGATTTTATAATGGGTGGGGCCCCGGGCCCGGCTTCGAA
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TGGAAGGGGTTTAGTTATTTAAAGGGGGGGAAATGGG
>Sequence 618

CAGCGTGCAGCTCACCGCGGTGGCGGCCGAGGTACTGGGACAGTTGGGTG
CGTTATGGATCATAACCTGAGGAGCCGGGGGAAGCTGGCCTTGGGTGTTT
TACCTCAATCATATATCCACACAAGTGCTTCTCTTGACATTTCTCGAAAA
TGGGAGAAGAAGAATAAAATTGTTTATCCTCCACAACTGCCTGGAGAACC
TGAGACCAGCAGAAATCTACCACTGTCGAAGACAAATAAAATATAGCAAA
GACAAGATGTGGTATTTGGCAAAATTGATACGAGGAATGTCTATTGACCA
GGCCTTGGCTCAGTTGGAATTCAATGACAAAAAAAGGGGCCAAAATAATTA
AAGAGGTTCTTTTAGAAGCACAAGATATGGCAGTGAGAGACCATAACGTG
GAATTCAGGTCCAATTTATATATATAGCTGAGTCCACCTCGGGACGAGGCCA
GTGCCTGAAACGCATCCGCTACCATGGCAGAGGTCGCTTTGGGATCATGG

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>Sequence 619

>Sequence 620

>Sequence 621

AGACGCCCGCGGTGGCGGCCGAGGTTAACGACGCCTGCCCATGACAGAGC CTAGGAAATCGCGATGACAGTTTACAGCAGGTAAAATCCGGTGGAGACCA GCAGCATCCCCGAGAAGCCGTGCGATTGTTTGGGCGTATGTAACTCGCTG GTACTCTTGCGCCAGGGGCGNGCCCGCATGCTAGNAAN

>Sequence 622

>Sequence 623

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AAATTATACAATTTCTGAGTGCTCTAAGTGCATTGGAAGAAAGCTGAAAC TCCATAAAAACATCACCTGCCTTCCATCATCATGAAAGCAGGAAAACTTG CCTTCCTTGTTGNGAGCAAGTAAAACTCCAAAAAAAGAGGTGTTGTACCT >Sequence 624

TGTTATGACTCACCGGGTGGCGGCCGAGGTACGGCGGGGAGCCGCCTGGA TACCGCAGCTAGGAATAATGGAATAGGACCGCGGTTCTATTTTGTTGGTT TTCGGAACTGAGGCCATGATTAAGAGGGA

>Sequence 625

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>Sequence 626

CCGGGCAGGTACGCGGNGATGAGTCCTAGGAGGCGCTGGCTCTTTGGCGG CTCGGAGGAGCGGCTGCTGCTGCTGCTGCTGCTGGTGGCCCCTTTGC AGATGTA

>Sequence 627

>Sequence 628

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>Sequence 629

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CGTGCCATCAGTGTCGACAAAAGACCATCGACACCAAGACAGTGTGTCGA
ACAGTGCTGTGGTGTGCGAGGACAGTTCTGTGGACCATGCCTGCGGAACC
GCTATGGGGAGGATGTCAGATCGGCATTGCTGGACCCGGATTGGGTGTGT
CCCCCCTGTCGTGGGATCTGCAATTGCAGCTACTGTCGGAAG

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>Sequence 631

AGGTCATCAGCTTGCCTCAAGTCTGGAAAGAAATTGGCTTGGGCTCATCA
AGTTGAAGGGACCACCAAAAGAGCTAAGATTGCTTGTAATACTCATGTGG
CCCCTAGGATGCACCGACTGGTAGTGATGAGCCAGGTTTACAAGCAGACA
CTGGCTAAGAGCTCAGACACTCTGGCGGGGGCACATGTAAAGATTCATCG
TTGCAACGAATCTTTTATATATCTGCTCTCTCCCTTACGATCTGTGACAA
TTGAGAAGTGCAGGAATAGCATCTTTGTCTTGGGCCCTGTAGGGACTACA
CTTCACCTCCACAGTTGTGACAATGTTAAAGTCATTGCTGTTTGCCATCG
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>Sequence 632

AGGTACCACACTCAGGGCAGTTTCCAGCTCCTCTCACAAACAGTAAATCT
ACACAACTTTCACAGAGAGTGTGTCCGCACACATTCACCATCAGCTTCAA
GGAGGGGTTCCGATATTTGGTGGTCTTACACCGAGGGCAACCCTGATCGT
CCATGGCGGTTTCCCTCCTACAGACTCTCGCAGGCGCCTGTTTCAGCCAG
AGCCACCTACAAGCCCCCTCCCCGCGTACCACACACTGTCCCAAATTAC
CTCTTCATTACCCAAATCAAAGAATCTTTCTGTTTTCCCAATCCTCAAAA
GGAATGAAGAAAAACCAAAGAGCAAACTCAAAAGATGATTTTTACCATAA
ACCTCAAATGTGGCTTAACAAGTACCTGCCCGGGCGGC
>Sequence 633

GCCCATTGCTGTTTGTTTGCTTGAAGACCAAGACGGAGTTGGGCCT CTTGA

>Sequence 634

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GAGGTTATTTTCAAGACACACACTTGCAAGTAATCTTTCTATAGAAATGG
CCACAGCATTATAATATTCAAAATATGGAAGATTGACAGTCTGAGGATTT
CTAGGAAAAAAAAATCAAAGGACTTGCCAAAAGGATAACTACATAACAGA
TATGACAATCTACAGGACAAAAAGACAACATGTCAGGAAATATTGTTCAT
ACAACAGCGTTAATGGAAAACAGTAAAACACCTTTTAGCAGTGTGCATGT
TAAGTCTTTTAGTAAGATTATCTGTAATGAGGTTTGAAAGTAAATCACTT
AGTAGACAAAGTAAACCACCACAGAACCAGGAATAGCACCCATCACTGCT
GCTTTGTCACTCCAGAAAGCTGAAAGTCAACCGAACAATGAAAAAAAGTC
AAAGAAGCATTTCCCTTTGAATTCAGTCCTAAAAATATGATGCCTTATA
ATTAATTTCAAAATAAGTATCTTACAAGTGTTTCATGAAACATTGTTTTC
CTAAAAGGCAAATTCAACATTATGAAAATATATTTTTGCCCGGTAGTTA

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CTGAGAAATGTCAATCCTTTCAACTCTAGAGAATGATGCNATGAAGTCGG CTTTGAGCCCCACTGCCGCTTGCGCGTGTTTNCCATTTGCCTTCTGCATT CGCACCTTAATGCAGATGTACCTTGCCG

>Sequence 636

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CAGATGTGTGTTATGTCATCTATAATATTAACTTTTTTTCATTTTAATAT
ATTTATGTTAATATCATTATAAGTCGACGATGACTCACGCGGTGGCGGCC
GAGGTACTAAAGGGCAAGGTTCACCACTACAAAAAGGAAGTTGTCTAAAA
GCAAGAATTCAATTAACGCTGGGTAAGAAAAGTCAAAACACTAATGAGTT
GTCCATGAAGCCAACTGCTAAGAACGCGCTCAACTATACGCGACATGAAG
ACACTACGCACGAAGCCTTACTTGGCGAGTCTGAATTTCTATTAACTAAG
GGCAGAGTGAGGGAGAACAAAGAGCTACTTCCGTAACATTTTAGTATCCA
GATAGTACCTGCCCG

>Sequence 637

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CAGTTTGGAACAACAGCAGAGATATATGCCTATCGAGAAGAACAGGATTT
TGGAATTGAGATAGTGAAAGTGAAAGCAATTGGAAGACAAAGGTTCAAAG
TCCTTGAGCTAAGAACACAGTCAGATGGAATCCAGCAAGCTAAAGTGCAA
ATTCTTCCCGAATGTGTGTTGCCTTCAACCATGTCTGCAGTTCAATTAGA
ATCCCTCAATAAGTGCCAGATATTTCCTTCAAAACCTGTCTCAAGAGAAG
ACCAATGTTCATATAAATGGTGGCAGAAATACCAGAAGAAAAGTTTCAT
TGTGCAAATCTAACTTCATGGCCTCGCTGGCTGTATTCCTTATATGATGC
TGAGACCTTAATGGACAGAATCAAGAAACAGCTACGTGAATGGGATGAAA
ATCTAAAAGATGATTCTCTTCCTTCAAATCCAATAGATTTTTCTACAGAG
TAGCTGCTTGTCTTCTATTGATGATGTATTGAGAATTCAGCTCCTTT
>Sequence 638

>Sequence 639

TGCGATGACTCACCGCGGTGGCGGCCGCCCGCACAGGTCCTGGCCCTTA
ATCCCATCAGATTTGTAGATCTTAACCAGGCAGTCACCGAGGCCTCGGAA
GTCCCTTTCAGCTCCAGCTTTACCCACATCAGCTGCTAGACGGGTACCT

>Sequence 640

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>Sequence 641

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TTCAGACAACACATGACTAAGACAGAATGAGACCACTCTAGTTGCCTCAT
GGGAAACTCGGGAAAAGACTGCAAAAACAACATTGTTTCTCCCTTTGGAA
TTCTGGAGTTATAAGGCAGAGGTCCCCCATCTTCCCGAACTGGCCTATTC
CGCTAGAAGCAAGATGGCTGAACTCAATACTCATGTGAATGTCAAGGAAA
AGATCTATGCAGTTAGATCAGTTGTTCCCAACAAAAGCAATAATGAAATA
GTCCTGGTGCTCCAACAGTTTGATTTTAATGTGGATAAAGCCGTGCAAGC
CTTTGTGGATGGCAGTGCAATTCAAGTTCTAAAAGAATGGAATATGACAG
TTNNNAAAAANAAAAAAAAAAAAAAAAAAAAAAAGGTTCCTTGGC

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>Sequence 642

GCCGAGATGACTCCCCGGGGGCGGCGGGACTTGGAGAATATTTCCACAA TAGCCGATGACTTGTTCTTGTTGACAAGAGAAAGTTCTTTGGCTGTTACC CTCAATGATAGTGAGGTCCATTGCCGTCTATTAAATGGAGATGATTCCAT CTTGTCTACAGACACTGAAATACCTGGCTAAAAGCCGCCTTTCCTCTGCG CTGCTACCAGCCCTGTCACAGGTCCCGGCGCTCTACCTCCCCGCGTACCT GCCCG

>Sequence 643

>Sequence 644

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>Sequence 646

>Sequence 647

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>Sequence 648

>Sequence 649

>Sequence 650

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GGTAAGAAACAGTTGATTAACACCCTGTGTTCTGGCAGGTGGGATCAGCA
ATATGTAATCCAACTCACCTCCATGTTCAAGGATGTCCCTCTGACTGCAG
AAGAGGTGGAATTTGTGGTGGAAAAAGCATTGAGCATGTTCTCCAAGATG
AATCTTCAAGAAATACCACCTTTGGTCTATCAGCTTCTGGTTCTCTCCTC
CAAGGGAAGCAGAAAGAGTGTTTTGGAAGGAATCATAGCCTTCTTCAGTG
CACTAGATAAGCAGCACAATGAGGAACAGAGTGGTGACGAGCTATTGGAT
GTTGTCACTGTGCCATCAGGTGAACTTCGTCATGTGGAAGGCACCATTAT
TCTACACATTGTGTTTGCCATCAAATTGGACTATGAACTAGGCAGAGAAC
TCGTGAAACACTTAAAGGTAGGACAGCAAGGAGATTCCAATAATAACTTA
AGTCCCTTCAGCATTGCTCTTCTTCTGTCTGTAACAAGAN
>Sequence 651

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CAATTGCTGGACCAGGTCAACATCTTCGTTTTGAACAGCTTTAATCAGCA
AGTGATTGTCTTCCACTGCAGCCCTTCTACCGCTGGAGGACGTGGGTCCC
TCCTGGGGGTTGTTATGATCCCTGCTCTCCATGACGGTAAATGCCACCTG
CTACCACTTTTAGCCTTTTCCTTGAGAAAATGCAAATTTATCTCCTAGCA
CTTAATCAAAGAAGCTTTGAGTGTAAATTGGGATTCTCTGGCAACAGAGC
AGCAGTATGAAGAAGGAACAATGTTCTCAGTCTTCTGACATTCCACCTGC
TCAACTCAGACGTCTCAATTATTCCTTTGGCAGCCGCAAAGCCTGGAAGA
CTGCTTGCAGCCCGAGCAGTTTCCTCCTGCTGCCTCCGCGTACCAGTGAG

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GAAGGAAAGAGCATTCTCCTTTAGGGCAGCAATCACAAN

>Sequence 652

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>Sequence 653

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GTAAGTTCTCCATCCATAAAGCCATTTAAATTCATTAGAAAAATGTCCT
TACCTCTTAAAATGTGAATTCATCTGTTAAGCTAGGGGTGACACACGTCA
TTGTGCTATATGTATGTGACTTCCCTCCCCCTGCCAGAATACTCCTTGGT
CAATTGTAGGTATTCTTTTTGGTTTAATTTTTTGCCAATGTAATTAAAAAA
TGGTATGTCATTTTTAAAATTTGTATTTCTTTCATTACAAATAAGATTGT
TATGTCAGTATTGTTATTGGCTTTTCGTATTCCTCTTAACGTGAACCGTC
TGTTCATTGTTTTTTACCTGTTTTTAGCAAGTAGTACCTGCCCG

>Sequence 655

>Sequence 656

>Sequence 657

GGTTGTGGATGACTCCCCGGGTGGCGGCGGGTACATTCCAATGAAGAATT TCTTCATTCTGATCTCCTAGAAGACAGCAAATACCGAAAAATCTACTCCT

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**TTACTCTTAAGCCTCGAA** 

>Sequence 658

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TACTTGCTGTCGTATTTTACGTGTTTTTATTTCAGTTTTTGGTTTATACTGT
GGCTATGGTAATTGAAATGGGGGCGATGGAGCTCACGGGTGGCGCCGAN
GTACCTNGTGGGCNTTAGGTCAATGTTGTTATACACTTTCACAAAAGATT
GTATCTTTGATCTCTTGGCGATCTTCTTCTTGCCCATGGCAGCTGTCACT
TTGCGGGGGTAGCGGTCAATTCCAGCCACCAGAGCATGGCTGTAGGGGCG
ATCTGAGGTGCCATCATCAATGTTCTTCACGATGACAGCTTTGCGTCCGG
AGTAGCGTCCAGCCAGGACAAGCACCACCTTCCCAGG

>Sequence 659

>Sequence 660

>Sequence 661

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>Sequence 662

>Sequence 663

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>Sequence 664

> Page 192 (of 261 pages in Table 2)

GATCCTGTTAGTTTTGGGGACGAACACTCTTAACCTGTGCACACAAACTT GTGATCTAGGAAATTTGGAAAAGAATTCCAGGGGAGATCTACTTTTTTCT AAAGATCAAAGATTATTTTGAGTGCCCTT

>Sequence 665

>Sequence 666

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>Sequence 667

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>Sequence 668

>Sequence 669

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>Sequence 671

GTCGATGTTGAGCTACCGCGGTGGCGGCCGAGGTACGCGGGGTCTTCTCA TGCTCCGTGATGCATGAGGCTCTGCACAACCACTACACGCAGAAGAGCCT CTCCCTGTCTCCGGGTAAATGAGTGCGA

>Sequence 672

>Sequence 673

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>Sequence 674

>Sequence 675

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>Sequence 676

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>Sequence 677

>Sequence 678

Page 194 (of 261 pages in Table 2)

GAGAGTGAGTGAGCTCCCCGCGGTGGCGGCCGAGGTACTTGTGGCAGACG TCGATGATCGAGTTCAAGGCTGTCTCCAGCTCGGCCAACATGA >Sequence 679

>Sequence 681

GATGGGATTGAGCTCACCGCGGTGGCGGCCGAGGTACTCTCGTTTCAGCT GGGCTCTTATGGCCAACCGCTCGGCTTGCGCCCGCGGGTTTCCGGAGAT ATGTTGTATTCGGCTGGGTCGAGGGTCTCAGGCAGAGTGCGCAGGCTCGA CGGCTTATACTTTGGGAACGACA

>Sequence 683

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>Sequence 684

>Sequence 685

>Sequence 686

>Sequence 687

TGTTGATATCGACTCCCGCGGGGGGGGGGGGGGGGGTTTACATGGCAACAAG
TATGGCGGCTGCTAGTGGTAGATTTGAAAGTGCGAAGAGTATCGAAGAGC
GGAAAGAACAGACCCGGAATGCCAGGGCCGAGGTGTTGCGCCAGGCTAAA
GCCAATTTTGAAAAAGAAGAAAAGGCGTAAAGAACTTAAGCGACTTCGGGG
TGAGGATACATGGATGCTACCTGATGTGAATGAGAGAATTGAACAGTTCT
CACAGGAACACTTTGTGAAGAAAAAAGAAGAAAAAAGACAAGCTTCTATTT
AAAGAAGGGAAGATTAATCAGTACCTGCCCGGAGT

>Sequence 688

GACGCGTGAGCTCACCGCGGTGGCGGCCGAGGTACACTCGCCAGCGGTTT TGCCACAAGAGTATACGGAACAAAGGAGACAGGCTCATTTATAATCTGAC GCGGCCACCCTCCTGCTGCGTTCGGTTTCCA

>Sequence 689

TGAGCGTGAGCTCACCGCGGTGGCGGCCGCCCGGGCAGGTACAAACTGGG
CACTGGATAGGTAGTTCCTTTGGTGGTCAAGGTGGCTCTACCTGTCCTTG
AGCTCTCGTGTCACTCGCTTGGTGATCCGTCCACACATCAGGCCAATCAG
GAACAATATACAGATGCTCCCACTGATCACAGAGAGAATGTAGTTCTTAG
ATGGAGACGTCATTACTTGCATGGCAAGATCAGAGAAGCCATCTGCTGGG
GCCACCTAGAATGACACAAGGCAATGTGATTCTCTGAGAGAGCACTGGGC
TGGTGGCAGTGCTAGGTCTAACTTATCCCTCTCAGTTCCTAGTTTÄÄTTT
ATGTCTTTTCTTTTGGAGAGGGGAGGGCAGGAGATAAGAAAAATCAACACA
GAGCTACAACTCTTTTTCCTGGTCATAAAACTATACACACGTCTACTGCA
CAAAATTAGGAATACCAGAAGAGCCAAAGTGGTGCAGTCACCCACAATTT
CTCACAGTGATCACCACTAACACCAGGACC

>Sequence 690

TGTTGACTGTGACTCCACCGCGGTGGCGGCCGAGTTTGATTTCTTGCAGT

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>Sequence 691

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>Sequence 692

>Sequence 693

>Sequence 694

>Sequence 695

>Sequence 696

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AAAAAATTTTTTTCTCTCCCCCGTAAAAAAAAAA

>Sequence 697

TTTAGATGAGTCTCGGGTGGCGGCCGCCCGGCAGGACGCGGAGAGACAGC
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ACGTTCGTAAGAAGGCAACAAGTTCTTCTCCTCTACAGAAGGATTTTGCA
AACAATTCGGCAAGTTCCAAATGATTCTGATCGCAAATACCTGGAAGATT
GGGCAAGAGAAGAATTCAGAAGAAACAAACGTGCCACCGAAGAGGATACA
ATCCGGATGATGATTACTCAAGGCAATATGCAGCTCATGGAGTTAGAAAA
AACACTTGCTTTAGCAAAATCTTAACTATAGCATTATTCTGAAGGATTTT
CAAAGTCTCCATGTGTCTTTTGCTGCATTTAGGATTAACAATGGACAACCC
CAATGCCCAAGCTTACTAATTAAAATAACCCTGGC

>Sequence 698

CGGTTGATGTTATACCTCACCGCGGTGGCGGCCGAGGTACACGGCCCGCT
CGTAGGGATCGTGTTTGTTCCTGACGACCCTACGGTAATGCAGCCGGAGC
TTGTTTTCCGTAGCTGGGGACAATCTTCTGTCCTTGCTGTTCATGTCGTG
GAAGAGAGGGGCAGAGTCTTGCTCTGTCACCCAGGATGGAGTGCAGCGGC
GTGATCTCAGCTCATTGCAACCTCCACCTCCTGGGTGCAAGCGATTCTCC
TGCCTCAGCTTCCCAAGTAGCTGGGATTACAGGCGTGCACCACTACATCC
AGAGACTGGGACTACAGGCATGGATTTTCAGGTTTATAACATGGCAGAGT
GAATTCTGGCAACACCTGAGTGATGCTTGTCAATGGCCACTATCAGGAA
TTTAAAACAAGATTTGGAATTATGACATCTGGACAAACCACATATGCAAA
ACCTACCTTTTGGTCCATTCTCCAGGGCTTCTTCTGCAGCTTCTGGTTCC
AGTTCTTTTTCGGAGCTGTCAGTGTGTTTTTGGCCTGTCCATTAACTGA
CATCATATTACTTGGGNCCCGGG

>Sequence 700

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TATTTCTATAACTACAATTCTACATTGCAAGTAGTTCTGTATATATTCTG
TCTTCTTCATATTTTTTTAGTTNTCNNTTGCTGTTGTGATTCACGTGGTGG

>Sequence 701

>Sequence 703

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TCCTGCAGATGTTGTCGTTGGAAAACTGTCGTCTTACAGAAGCCAGTTGC
AAGGACCTTGCTGCTGTCTTGGTTGTCAGCAAGAAGCTGACACACCTGTG
CTTTGGCCAAGGAACTCTCATTTGGGGATACAGGGGTGAAGTTTCTGTGT
GAGGGCTTGAGTTACCCTGATTGTAAACTGCAGACCTTGGTGTTACAGCA
ATGCAGCATAACCAAGCTTGGCTGTAGATATCTCTCAGAGGCGCTCCAAG
AAGCCTGCAGCCTCACAAACCTGGACTTGAGTATCAACCAGATAGCTCGT

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>Sequence 704

TGAGATGCTCCCGCGGTGGCGGTCTGCCCAGATCCATGATGTGCAGTTCT CTGGAGCAGGCGCTGGCTGTGCTGGTCACTACCTTCCACAAGTACACGGG TCTATTTGGCCGTGACCTTGCTCTGGAGACGATGATATCCCTTCAGCCTG AGGGAATTGATGTTGATGAACCCGGAGGCATCAGTTGGCTCATAATCACC CTGCACGTTCATGCTCACCAGCTCCTCATTGTTCAGAGACAGTGGGGACT CCCGGCCGAGGATGTACCT

>Sequence 705

GTGACTGGCTCACCGCGGTGGCGGCCGAGGTCCGACGCAGCAGGC

>Sequence 1082

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TTAAAATAAAACTTAAAAATTACATGCTAGTCTACACAAGTTTAACTTAC
TTTAGTCACTTAGTGAATTGTGAATTGGCTCCCATTAGTGGTCAGGAGAA
TGTATTTGGTGTAGAAACCAAATAAATCAAGCTATTATCGCCTTGTGAGT
ACE

>Sequence 1083

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>Sequence 1084

>Sequence 1085

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# Table 2

AAGAAGAAATTTAAGAGGTACCTGGCCGGGCGGGCGATCTAAAGGG

>Sequence 1086

ACTITNITITITITITITITITITITITGAGACAGGGTCTCGCTCTATC ACCTAAACTGGAGTGCACTGGTGCAATCTCGGCTCACTGCAACCTTCACA CCCCAGGCTCAAGTGTCAATCCTCCCGCCTGAGTAGCTGGAACCACACGT GCGCACCACTAAACCCAGCTGTTTAATACACCATTTTTAACCCAAAACAT TAAGAAAATATAGGAACAGTAAGTAGATTACATTTTGTAAACAGACAAG CTTACAAGTTTTCTCAAATATGAAAGTCATACTAAACTGGGAGACTGTTA ACTTCTTGATGGGGTTAATCTCTAATATGAAGCCACAGTCATAGCTAACT ACAAATTACATATACAATGCCAAAAATATTCAAAAATAACATTTTTTTGCA CCTTAATGATTACAAATGCTAACCAGCATAAAGACACTGGAAAGTTTCAG AATCTCCTCATCACATACTTTCAAATATCTTCCCTTTACTTCCATGAAAT TGAACGCGGGATTCTATGTAAGTGATGACTTGTCAAGGTTCCAGGTGTAT CTTAACTTAAACTAAAGAATGCCCTAACTTAGATGGGTTTTGAGCCTATA CAATTGGTATTGGTTGACCCTTAACCTTTACCTCTCTAACATGGAGGAC GAAGAAAGCTGACCTTGGGCGCAACCACCTAAGGGCGAAATTCAACACAC TGGGGGGCGGTATTATTGATACCACCTGGGACCAACTTGGGGAACATGGA >Sequence 1087

ACCAGAAGGCAGACTTCAACCAGAAACAACTGTGAATTGTGATGGAG AGATGGCTCTAGTATCTGAACAACGAAATTATACTTATAGACTACTTTC TTTTCACAGAACAAATGAGCTTTCTTGGCTTTTAACAAAATTATCATTGA AAACTACAAAATTAAGATCACCCATAATCCC

>Sequence 1088

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ACATATCCCTATCTACTATGTAAAGACAAAAAGGCAAATGAAATGATGTA ATACAATGAACTCCTCAGAAAATAACTCTGTAAAATCTCAGACTGCCTGT TTATCATATGCTAGAGTAAACTTACATTCCTTTCTTGTTAGAGAAAAATG ATGGTAAAATCCATGCATTAATCAAAACTAAAAACATGAAAAAGGCAAGCC AACTACAAGAGAAATACAGTTGGCCCTTGAACAACACAGATTTGAACTAC ATGAGTCCGTGTACC

>Sequence 1090

>Sequence 1091

GGTACCTTTGCAGTTTTCTAAGGGCTCTTAGTGCTTTTAACTAGAAAGGG

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>Sequence 1092

>Sequence 1093

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CCTTGCCATTGAAGAACTCTTTAACCAGTTGCTGAATCTTTGGAATTCGA
GTCGAGCCACCAACAAGAACAATTTCATCAACCCGCGTACATGCTAAGAC
TTCACCAGTCAAAGCGAACTACTATACTCAATTGATCCAATAACTTGACC
AACGGAACAAGTTACCCTAGGGATAACAGCGCAATCCTATTCTAGAGTCC

>Sequence 1094

>Sequence 1095

>Sequence 1096

>Sequence 1097

ACGCGGGGGAGGTCTCCATTCAGTAGGTGGCCCGGGATGAAGGCCGTGTTGGGGGCTAAACCACACTCTGGAATTCTGTCAGCAAATTCCTCGCTGTGA

Page 201 (of 261 pages in Table 2)

>Sequence 1100

>Sequence 1101

GGTACTTGTTGGCTAGGAGCTGAGCTTATCACAACAACAACAACAGCATTAC AGGAATTGTCTTATATGTGGTCAGTTGTAAAGCTGATAAAAATTATTCTG TAAATCTTGAAAACCTAAAAAATTTACGCAAGAAAAGACATCACTTGTCT ACTGTAACATCCAAAGGCTTTGCCCAGTATGAGCTCTTTAAGTCCTCTGC CTTGGATGATACAATCACAGCATCACAAACTGCGATCGCTTTGGATATTT CCTGGAGTCCTGTGGATGAGATTCTTCAAATCCCTCCACTCTCTTCAACT GCAACTCTGAATATTAAAGTGGAATCAGGAGAGCCCAGAGGTCCTTTGAA TCATCTCTACAGAGAACTGAAATTTCTTCTTGTTTTTGGCTGATGGTTTGA GGACTGGTGTCACTGAATGGCTCGAGCCCCTGGAAGCAAAATCTTGCTGT GTGATTCTACAAAAAAGACACTGAGGTTGAGACCTTGAAGCATGACACT GCTTGCAATCCATCGTTCCGTCAAGCGTCTTTTCAAAGTTCGGGGTGATC TTGATATTGCTGAACAACTGTGGTGCAAAATGAGCAGTAGTGTGAATTCA TACCAAGACTTGGTGAAGTGGTTCACATTGATCATTCAAATCTACAACGT GGGGAATTCAAGCCTGGCTTCATAGGGGAAGTACAATTAACTAGTAAGCT CATTCTTAAGCTATTT

>Sequence 1102

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>Sequence 1103

GGTACTTTGTTAGCGTCTGCGTGTGTATGGAAAGTTGACAAAAAATGGCA
TGAAAAGATCATGATTGGATTTTCTTTTAAACCTGCCCTTCTGTAAAAAA
TAGTTTATATATTTTTAAATTAGTAGGTATGTGTGGCTTCCTTTTTTCCT
AACATTCCCAGCAAATTTTTGCTGCTAAGACTATCACTGTTAAAGTGAAA
ATTACAGGGAAAAATGTGATGAATATACCGTAACTCAAAATGTGATATTT
TCTTAAAATCACTCTTTTATGCTTTAGGAACTGGTTGGTCTCCACTTTGA
TTATTAGTGTAAAGAGCCTGAGTATACGTGGATTTCATTGTAAAATTTAA
CTCCTTGTCTTTTACTTGGGGCACGGGGCCCCTGGAGGGCTTCCCTACTT
TCCCCACTATGTTAACAGGTAATTCTGATTTATGCCTTTAGTTTGACTTA

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>Sequence 1104

CACTATAGGGGCTCGAGCGGCCGACCGGGCAGGTACTTGCAATGGTTTGA CATTAAGAGAGACTATACATTCACAGAGGTTGGGAGCTTCTGTCTAGC CTGTTGTCCAAAACTGCTTATAAAATTTAGCAACTAATTATCACTTTTGA CAACTATTTTAATTCTAGAAAATAGGTTTATAAAGATTTTCTTAAAGTGT TATCTATCCTTCCAATGACTTATTATAAATTTTAGAATGTATTTCTATAG GGTGGAAAAATCTCCTTTAGTCAGAATTGAACAGTTTTCATGAAGAACAT GTTACACCATGTAGAAACATGGGTACC

>Sequence 1105

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>Sequence 1106

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>Sequence 1107

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>Sequence 1108

CCCTTTCGAGCGGTTCGTTTGGCATGTATAATGAAATGTCTTTTAAAAAA AGTTTGTTGTAATTGTGTATGTAATTCTGACAGTAATTCAAAACACAAAA TCACACATTTTCCCTAACTTCCCATGTTCTGGATCTGGGGACTGCAATAT TTATTTCAATGCATCAATGCGCAAAAATTTCAATTCAAAAAAGCCAACCA CTGCTATATGCAAATAAATAAAACATTTGACAACACTTTTATAATCAAAC GTATGCAATGCCTATTTTAGAAAAAAGGTGTCTTGATGAAAAATGATTTTG AAAATAGTCACTGACACACATTATATACAAAACCTTTTATATAAAAAATT AAACTATTTTCAATGAAATTCCATGTTCACACTCTATTCTGAGAATTGCA AACTGAATCATAAATAGGTCTACTAACGAAATCATGGTTAAGGCAGTATT TTTTACAAGGGTTTTCTTTTATATCACATATGTCACTAAATACTACTGCA GTCAAATATACAGATGCAATCTGACATGCCTTATCGTTATTACCTGAACT TTTTTCACTGTATAAAGGGAGAAATACATTTTTTACAAAAAAATTTTATT TATAAAAATACTGGTATCATTTTCCAAAAAAGCATTACTTAAACATTAAA GGTTAAACGTCATCTTATGATGTAAAACG

>Sequence 1109

GGTACATTTTGGGCCTTTAATCCCATCTAAACAATTTGCTGTTAACGAAA CTCAAAAACAGAAATACCTATATTTTCTCGCTAAATCCAATTGTTACCTA TGATGAGTAAAGACACTAGATCTGCAGGTCCTAGTACAATCTATACATAA AAGGCCTTCAGATTTGAGGCACAAAAAAAAAAGGGCAAAAAAAGAAAAAA AAGAAAAAAACCTTCTACACATTTCCTTCTTTTATCTGCAATATGAGA AGGAATCCTTTCTAACTCTAATAACATATTAACAAGAATTAAGAACACGA TTGTCGGGGAACTCAGATGTTGGCAAAGCTTANAAATAAAAAAAACAAGGG CTGGGTGCAGTGGCTCAGGCCTATAATCCCAACACTTTGTGAGGCCGAGG CAGGAGGATTGCTTAAGCCCAGGAGTTTGGGATCAGACTGGACAACAAAG TGAGACCCCTATCCCTATCTCCCAAAAATTTTTAAAAATAGCTGGGCAC AGTGGTGTGTGCCTGTAGCCCCAGCTACTTAGGAGGCTAAAATGGGAGGA TCCCTTGAGTCCAAGAATTTGAGAATGGCGTGAGCTATGATCAAACTTCA GAAAANNAAAAAGGGGGAGGTTCCCCTTGGGCCCCCGGGGCCCCGGGG GCCCGGGGTTTTTTCGGAAAAGAGGGGGGGCCGCGGAAAAATTTTTTTCC TCCCCACAGGCGCCC

>Sequence 1110

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ATTCCACCAGATACCCTAAATCATCTCTCTCAAGTTCGAAGTTCCACAGA
TCTCTAGAGCAGGGGCAGAATGCTCCCAGTCTCTTTGCTAAAGCATAGCA
AAAATCACCTTTGCTGCTCCAGTTCCCAATAAGTTCCTCATCTCTGTTGG
AGACCACCTCAACCTGGACTTCATTGTCCATATCAAGATCGGCATTTTGG
TCAAAGCCATTCAGCAAGTCTCTAGGAAGTTGCAAACTTTCCCACATTTT
CCTGTCTTCTTCTGCACCCTCCAAACTATTTCAACCTCTCCTGTTACCT
AGTTCCAAAGTTACTCCCACATTNTCAGGTATGTTTACAGCAGCAACCCG

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**CTCTACCGGT** 

>Sequence 1111

**GGTACTTTTTATGTTTTAATTTTTTGTAGAGAATGGCTCTTGCTATGTT** GCCCAGGCTGGTCTTGAACTCCTGGACTCAGGTGAAGTGATCTGGCCACC TCAGCCTCCCAAAGTGCTAGAATTACAGGCGTCAGCCACCACTCCCAGCC TGTAGCCTATTTTTATAAATGAAGTTTTATTGGAACATAGCCATGCCTGG TCATTTACATACGTCTATGGCTTCGTATGCAATATAGCAACAGAATATAT TAAACATTTACTACCTGGCCCTTTGCAGAAAATGTTTGACAGCTCCTGCT GTATAAACATAAAATCTGCCAAAAAATGCTGATATTACCCCACATGGAGA AACACTGAACCCCTCTTCAGAAATCAGATGCCAATTTAAATATTACTATC TTTTTGAGACAAGGTCTTGCTCCGTTGCCCAAGCTGGAATATGATGGTGC CATCATAGCTCACTATAACCTCCGAATCCTGGGCTCAAGTGATCCTCTTG CCTCAACCTNCTGAGTAGCTTGGACTATGGGCGTGTGCCGCCGACCCTGG CTAATTTTTGGGATTTTTAAAAAAAAAAAACGGGGGGTTTTCCCCACCGTT TTGGGTCCAAAAACTTGTGGTCCTTTGGAAAAACCTTCTTTTGTGAAACC CCTTTCCGGTGGGAAATACCCTTGGGGGGCCCCCCAAACCCCCTTTTTTT >Sequence 1112

CCGCCGCTCGAAAGCCCTATACTTAGCGTTTTTTAACTTATATNTCTGTGC
TTNNNNNNCTNNNGGGNAAGTGGGGGGAATGAGGAGTGGGGGGGAGTGC
TACGCGCATGTGTTCTCAATTCCCCTTACGGCCCCGGCAGACCTTGGC
TTGACTGTGGTCTANAGCACAAGAATATGCTAGGCTGCACTCTGCTAATC
AGATGTGTAATGGTCCTGTGGNGTGTATTGAATGGGAAGCTTTTTGCCCG
GNGAACCAAAGCTCTCATGGATGATGTGGTGAAAGCCACTTCTAGGGGCT
GATCACCATCATAGGTGGTGGAGACACTGCCA

>Sequence 1113

>Sequence 1114

>Sequence 1115

TGTACAGAAGGGTTTCACCATGTTCACCACACTGGTCTCAAACTCCTGGT CTCAAGTGATCCATCTGCCTCAGCCTCCCAAAGCACTAGGATTACAGACT TGAGCCACCGCACCTGTCCCATCACTTTATATTTTCAAGAAGGTGGTGA GGGTGTGTTGGTGCCTGNGGTCTCTAGCTGAAGAAAAGGGAAATTTTTCT ATCTCTGGTAATGTCTTTA

>Sequence 1116

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GTTAGAGATGTCCCATCACTTATGGCCCTACACTGTTTACATCTGGACTC
TGGATTGCAAGTGTAAGGAAGAAAGTGAAAATGAAAGAGAAAGTGGAACA
AATATTGGCAACAGAGCCCCCAGAGGACAGTTGTCCCTTTTCCAACAAGT
TAAGTGGAAAATGCTGTTGCCATGGGAGT

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>Sequence 1118

TGTACTTTTTTTTTTTTTTTTTTTTTTTTTTTTAAAGAAAAAGTTGGCCCAG CCCCAGGGAATAAATTTTGACTGCTCTAAACAACCACAGACCAAGGGCCA AATCTGGCCCTCTGACTGTATAAATTAAGTTTTACTGGAATAAAACCAGG TCCATTGATTTATCCATTGTCTACATACGCTTTTAGGCTACGATGGCACC ACTGTGCCTCTTTATGGAAAAAGTTTGCCATTCCCTAGTCTAAAGTTTAC CGTTTGCCTCTTTATGGAAAAAGTTTGCCATTCCCTAGTCTAAAGTTTAG ATTCTGAGCTTATCATGTTATCCTACCCCCCCCCGCGT

>Sequence 1119

ACAATATGGAAAGGTAAGATCCATACCCAAAGTTAGGTAACTGTTTGAGT TGTCCCATGTAAATAGTTTAAACACTTGTAGAAGTATTAGAAGAGATCCT TAGGGAATGATGCAAGTGGCATTTGAGCTATTCATTTAGAGAANAGTTTA GAAACATGCAGTCTANNAGGAAGAGATAGAGGCAATAGGAAAAAATATAC TTAAGATTAACAGCTGTTTATCCCCGACTTGCTTAACTTCNGATGTNGTG TCAGAAAAGCAACAGTATGGGCTAGAACAAAGTGGGAATGGCGTTTTAAG AAGTAGGAAAAGGCAAGTCTAAAGAATTTTGAACTTNAGATACTAAACT TGTGTTGCNAGTGATTAATCATAAGCTTATTCTTCATGAAAAGTATATAT TTCTTTCACACTACNCTAAGACAGTATTATACATTTTGCTTTTTTATCTG AGGGATTGAAAAAAAAAATTATTATTTTTTGCCTTTTTAANTCCTTAGA TTTTCCTTTTAAAACCCCCCCGGGTGGGAAACAGAGGGGGT >Sequence 1120

GGTACACACATCTTTTTGAGATCCTACCTTCAGTTCTTTTGAGTATATAG CCAGAAGTGGTATTACTAAATCTTACGATATTTCTATTTTTAATTTATTG AGGAACCACTGTAGTTTTTCATAGCAGCTGCACCATTTTACGTTCTCACC AAGAGTGCACAAGGGTTCCGAGGTTCCCACATCCTCCCCAACACTTGTTA TTTTCTGCTTTTTTTAGATTGCAGCCATCATAGTGGGTGTGAGGTGACAT TTCATTGTGGTTTTGATTTGCATTTCCCTAATGAGGAGTGATGCTGAGCA TCTTTTCATATGCTTACTGGTCATTTGTATGTTGTCTTTGGAAAAATGTC TATTCAAGTCCTTTGACTATTTTAAAAATTGGGTTATTAGAGTTATCGTT GGTGGTGACTTGTAGGAGTTTCTTTCTATATTCTGGATATTAATCCCCTA TTAGATATATGATTTGCAAATATCTTCTCTTATTCCTAAGGTTACTTTTT CCTTTTGGTGAATGGGGTCTCTGATGGATAGAAGTTTTTAGGTTTGAAAT **AAGCTAAATTATCTGGTTTTACTTTTGGGGGCTGGGCTTTTGGGGCCATA** GCTTCAAAGGCGAATTCAAGACACTTGCGGCCCGTTTTTTTGAATCCAGC TCGGTCCAAACATGGCGATATAATGGGATAACATGGTACAGTGTTAAATC >Sequence 1121

> Page 206 (of 261 pages in Table 2)

TATTTAGTAGAGACGGGGTTTCACCGTGGTAGCCAGGATGGTCTTGATCT CCTGACCTCGTGATCCACCCACCTTGGCCTCCCAAAGTGCTGGGATTACA GGCGTGAGCCACCGTGCCGGGCTGAAAAATAACCCTTTAGATATCTACAG CTTTAAACTGTGTGCAGTCATGAAAAGCAGACATTAGAAGTCATTGGCAT TTAATAAATTGCAGTAAAATTATACAGTAAATACATTACAATCATTAATA ATAGGCTTTAATGAGAAGAATTTAATAAATAATCATTAAAAAGACAGCAG AATTTTATTCTGTTCTCAATATGTTGCTGCTCTTCTTATCAAATACTATA ATAAAACTATATGACTATTATATAGATTTCAGGAGCTAAAAAAAGCCTTA TATTTTCAAATTAAAGAACAATATTAATTTTGCAAAATACAATGAGCATT ACTGAAGTATAAAGGTAATATTTTGGATTAAAATATATGGTCATTTAGAT AGCTTAAAAATACCACCCCAAAATTTAATAAATATGTAGCACTTCAAGAA GAATTTGAAATAACTGCTGGCATTCTTTTGGAAAGGGACCTTTAGGGAGT **TCCTTATCCGACACGGAT** 

>Sequence 1122

CCCTTCGGTTTTCCGGGCAGGTACGCGGGGGGGGCTCGTTCAAGATGGCG GAGCTCGACCAGTTGCCTGACGAGAGCTCTTCAGCAAAAGCCCTTGTCAG TTTAAAAGAAGGAAGCTTATCTAACACGTGGAATGAAAAGTACC

>Sequence 1123

>Sequence 1124

>Sequence 1125

>Sequence 1126

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>Sequence 1127 TTTTGGCCTCCAATTCCATTTTAATTTTGTTTCTTTGTTTTGTCTTCCTC AAATATACAGTCCATCACCTTGGCTCAGTGCATGTCACCAAAAATTCTCC AGGGATTTCATAGTCTCGGTGGTGTGGCTGGCCCAGGACTATCCATGCAG GGAGGCCTGCACCTCTGACAGTCGGCTGCAGCTGGGGGTGCCCATCTTTT GTGCTCTGTGGTACTCCTACACACATAAATTCAGGAAATGACTAGATGAG CCTGAGTGGCTTTATCATTATTGTGCAAATACAGTTTCTATACCCACAAA GAAAAAATTCACAAGCTTGTGTACCAATTACCTTTACCATGAATTTTATG TACCCTTGCGCGCTACCACACTTAGGGCTATTTTCTGTCACACTGCGGGT CCGTATCTTAGGGAATCCCACTTGGGTCCCACATCATGGATGACACCTGG TAATTAACTGGTTCCCTCTCATAAATAAAATTCCGTTGTACATTCAACAC AAAATTACGTACCGTACTGCAAAATATTATATTCTTCGGCGTGCCACTCA GATGATCTTACACACATCTATTTGCTACGCCTTATTGTTTCTTTACAATT ATACAACTTATTCGGATAACTTCTCTAAACTAACTTTACACCCCTGCGTT AGGGCGCTTATCTATTCTCCATCATTCTCAACCGTTT

>Sequence 1128

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GAATGTATTTGGTTATAGATATGTGAAGGAAAAGGCATAATTATATGGTC
ATCCATGCTGGGGAATATTTTGTAGGTATGTTTTGTTGAGAGAAATCGAT
CATATTGGATCAATAGAATTAGACAAATATCTTGAGCATCAAGAGACCTG
GAAACATGGGAATGATAAAGAGAGAAAAACTGCAGTTTCGACGTTCTTGA
GGCCACAAGAGAGATGAGAGAAAAACTGCAGTTTCGACGTTCTTGA
AGAAATTGTGTGGGAGAGAAAAGATGGTTTATTGTGATGGTCAAAATACCG
AGCATGGGAGAGACAACATTTGAAAAAATGAATCAAATTGATAA
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>Sequence 1129

ACAGTGGCGCAATCTTGGCTAGTGTAATTCAGTCTTTTGAATAAATGGAA AAAATAAATTGTATGTTATTTTTATACAGAAAAAAAGGCCTTAATATCAT AAGGTTTTTTTATAGCCCTCAAAACTGATTTTTAAATGGAGGTAGGCAAC TGAGAAAATAAGCATTTAAATTAGTTTTCACCCCAAAGCCCCCCAAAATT TTGCTTACAAAATTAGGTACC

>Sequence 1130

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ACCCAGAGGGAGAGGCTAGCAGTATTTTTAAATTGGTTTCTAAATTTTTT ATAGCTTGATGGTAGATAACACATTTGCTTCATTGAAGTAATCTGAAAAA CCAATCCTCAAAAGACCTCTCAATTAGAATTCTTAAATGACAATGTTTTC

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>Sequence 1132

>Sequence 1133

GGTACTGAAACTACAGGTGTGAGCCACCATGCCTGGCTTAAACATTTGTT
TTTAATTAGCCAGGCTTGGTGGCCACATCTGTAGTCCCACCTACTCAGGA
AGCTGAGGTGAGAGGATCACTTGAGCCCAGAAGTTCAAAGGGGCAGTGAT
CACTCCATTGCACTCCAGCCTGNGTAACAGAGTGAGACCCTGTCTCGCCA
AAAAGAAAGAGGTTAAGGAGGAGAAGACTCTAGACCAAAAGAAGTAACTG
ATATTATTGAAAATATTTGATAGCAATCGCAATTATTTGGATAACTATTT
TCACATATGTAAGCAAACCAAATAGGGTCTCAAAAGTTTCAGACCAAATG
ATTCATGTTCTCTACTTCAACCTTAAAAAAAAAGTTTAAAGAATTCTACAAT
TACAAAAAGAACAGTTATTCTATAGTTACAAAAAGACTTGAAAACTTTCA
CCTGAATGCATCTCTTTTGTTACAAAACCATTAAAGGAGGTAGGGGGGAAC
TTCATGATTCATCAATGCTGCCTGCTTTTTTAACCCAGGAAATCCTTTAC
ACCCCTTCTTGCTCTGGCCAGCAAGAACCTGAGGTGTACCTGCCCGGCCG

>Sequence 1134

ACTITNTTTTTTTTTTTTTTTTTGTTTAGGAGCCTCTGGTTACGTTTTCTTG TATATTTACTTTCTCATCCTTTCTCTTTTCTTACGCTTCCATCTTTGACA TCCTTATCTATTCTAGTGCCAACCCCTCTCTTTAAAAAGTCNAGTAGTGT NNAATATAGTTGGCTCNTTTTTATTTANNAAAAATTTTAAAGATTGGGAT ATTACANNAATATTTTGTTAACCTACCCTAGCAAATATTTNTATGGGTA ATAACTTTCGCCTATTTNTAATATAAAATCCCTGGGTTTTTTAAAATTCT TGAAAATGGCTCCATTTTAAAGTAATAAGGGAGACAGGGGTGAAAATTGG TNTCCAAGTTTTACCTACCTACAACCAAGGAAATAAAGGGAAGCTCTAGA TTCCTTGGTCCTTTTTTTCCAAAAAAGAAAAATTTTTAAAAACCAAGGC TTATTTGGAGGTATAGGTTTGATTATAAGCCTATATTTTGGACATGGTCC GGCGCGTTACTTAGTGGATTCCCGAGCCTCGGTACCCAAGCCTGGGCGTA AATAATGGGCAATAAGCTGGTTTCCTGGGGAGAAAATGGTTATCCCGCTC CCAATTCCACCACAACATACCAACCCGGAAGCCTTAAGATGTAAAGCCTC GGGGTGCCTCAAGGACGAGCCTAACCTCCCATTAATTGTGTTGCGCTTAC TTGCGCCGTTTCCCAATTGGAAAACCTTTCTGGCCAACTTGATATATGGA AATGCCCACGCGGGGGAAGAGCGGTTGTCGTTTGGGCGCTTTTCCCCT CCTCCCTTCACTGACTCCCTTTCCCTGGCGTTTGGTGGTGGGAGGGGTAA AT

> Page 209 (of 261 pages in Table 2)

>Sequence 1135

GGTACAGAGGAAATGGGACTTTGCAATTATATTTTTCTAAGTGGTCTGAA CTTGGTCTCACTACCCACATCANCCTGGAATGGGTTACCAGGCCTCAAAG GACTGCCCCACGGGCTAAACAGCTGATCCGCTCTCTGAAGCCAGACAGTC TTATCTGGGAGGTCCTTTACAGATGCCACTGTTGAAGGCCCGGAAGCTGA AGAGAGTGAGCTCCATCCTCAAGTAGTCCTTTATGCTCCTTTGGAACAAG CTTTGCTGTTTTGGGCCGGCATTTGTGAATTGGGCCTGGAGTGTAAGGTC TTTANAAAGAAGGGATGGGTCCTTTAGGTAATGAAATAGGTGTTGATGGT GTTATGGGTGATGATGGAACTGAGTGCGGGTGTATAAAGTCTTCATCCTT CCCAACTGGGTGGTATCTAAAATCGGCTTGGGCTTCACATTTATAAGGGA GAAGGGTCGGGCCAGGTACCTAAAGGGAAAGGAGGGACCTTCTTCCTTAA GGGGGAGGTCCCTGGCCACTGGCAAAACGGGAGGGGGGACAACACCTGGT GAAATTACCACCCCCCGACGCCAAGTTGTACCGCGGGTCCTCCTCGGGT ACTCTGGCCGGGGTGGTCGTTTTTAATAGGGCTAAATTCTTATCACATTG CTATGCCGGTCACTATAATGGAATCCGATAATTCGTTACGGAGACCTTGG CTCAACCATAGGACTAAGATTGTATTCCTGGTGTGCAAACAGTGATTCGC CTCTCAAATTCACAAAACATTTCGAGGCACGGAGCTTAATGAATAGGCN >Sequence 1136

>Sequence 1137

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>Sequence 1138

>Sequence 1139

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AATAAAAAGATTACCATCACTTACTATGAACCACCATTCCATGAATCCAT
GTAGCTGAACACTCCTAATGAAAAGTTTAATTATCCTTCAACCTGTAGTT
GAAGAACTCAGTTCATGTTCATTGACAGATTTCCATTACAGACCCACTAT

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ATTGATGTTACTTTCTTTGACACTATATTTATATAGATATATTAAAATT
GAAAACTTAATGCTGTTTAGAAGGCTATTAATATAAACTATTAATTTCTGA
AAGCTTTGAGTTTCTGAAAAGGCTTTTAAGATCAAAATTTCTGAAACACT
CCACACATTCTTCCTCACCCACATTTAATTATAAATCAATGTTATACTGA
TAAAAGGTTCTATACACACACTTTAGAGATATATGTGTGCGTGGGTGTGTC
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TTCCCGCGTCCTTGCCCGGGCGCCGTTAAAGGGC

>Sequence 1140

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>Sequence 1141

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>Sequence 1143

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GACTGGTTGACCTTGTGGTGAAAATTGGTTAATCTCGCTTCACGAATTGC
CACAACANACAATACTGACGCTCGTGAAAGGCATAAAAGATGATAAAAGC
TCTGGGGGTCGCGCTTAAGTGAAGATGAGCTGTAACCTCAACAATTAANT

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GTGGGGTATGCTGCCTACACTGTGCGCCNGTCTTTTCACAGATGCNGAGG
AAGAACCTGTGGCTGGTGCCCAAGACTGGACATATAAAATGAAAATCTCG
GCTCACACATCCTCGCGGAGGAAGAAGGGCGTGTATTTAGGCGATAATAT
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TTCTTAACGATCAAGACGCCGGGTTAAATACTGGGTTATTCTCCACAGAG
ATCATGGTGTGATATACCGCTAGATGAAAAAAACCATTGTTGAACACAGA
GAGTGCCTGCCAACAATGGCTCATGAACCCGATGAAAANGGGGCGCGTGT
TTCGTTGATGTTNTATTACAATGACGGTTCCAGTACTCCGCTGGAG
>Sequence 1144

>Sequence 1145

>Sequence 1146

>Sequence 1147

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> Page 212 (of 261 pages in Table 2)

>Sequence 1150

>Sequence 1151

>Sequence 1152

ACAÁGCAAGACTTTCCTTTAATATTGATAAAGAATTGAGTATCATGTATG CATTCCCTTTTATGATATACAATTAATTGTAAGTTATTTCCCCTTGTATG CAACCATCCACATTTTTCTTCTGACCTTTTCCTCAAGTCTTACAACTACT TTTAATGACTGCATTTTGGAGGTGGTCCCAGGAGAACAGATGTTGCCTTA TAATGGTGTTTTTCCATTTTTATCTTTGATTGGGCAAGGGGGTTGGAAGT ATTATTTAGTCATTATATGGATTCCTCTAAAAATTGTTCAATAGAATATA TATTCATTTATTCACTTACTTATTGTTTATTTATTGCCTAGAGTATACCC

> Page 213 (of 261 pages in Table 2)

AACACTGAGGATACAATAATGATCAAGACAGGTCTAATTTCTGTCCCATA GAGCCTTAATTTGAATTAGAAAGAATTTTTTTTATTAAGCCGTGGAAAAAA AGAATCATAATATAAGTTCCTTTGCCCTGACCACGCTAAGG

>Sequence 1153

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>Sequence 1154

>Sequence 1155

>Sequence 1156

>Sequence 1157

GTACAGGCTCCTGCCTTTAAGAGCACTGTTTTGCTTTTTGGGGCAGAAAG CATGGACTTTTAAAGGGGGACTTGGCATGAATGCATTCAGAGGAGGAGT GAGCAGTTGGGGGTCTGCGTGACTCGCTTTCGTGCTTAATCTACTGGTGG TCGAGCTGGCTGCATCACAAGCAGAGCTAGGTTGTATAGTGGCCTTTGTC TCAAGACACTCTCCAGGTGGGAGAGCCTTCCATCAGGGACATACTTTAGG TTGCAAATTGACTGTTGTCTCTTGAGGCAATCTCCTTGTGGGAGAGAGTT TCTGCCCTGGAGCTTCAAAGTAAGCACGTAGTTAGATAAGCTTCCAGTGT AGTGAGTGTCTGGTGAAGGGAAAGGTAAAGGTTATGATTGCATTTCTGAAG

> Page 214 (of 261 pages in Table 2)

>Sequence 1158

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>Sequence 1159

>Sequence 1160

>Sequence 1161

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>Sequence 1162

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ATCACTTACACAAAGCCACACAATTTTGAGTGGCAAGCTGGAATGTGAAT
CCAGGCAGTCTGACCCTGCAGCTTATGTGCTTAACGATACTGCCTCTCAT
GTGGGCAAAGGATGGCCCAGGAGAAAGGCAGGCCCAGATTCCAAATCTGG
CTTGACCGTCTAAGAGGCTGAGTCTTAACCTCTCTGAGCCTTTGCTGTTT
CATCTGTAAAGTGGTCCTCCTGACAGCTGCCTCCTAGGGTTGTTTTGAGG
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CCGCTCAAAGGG

>Sequence 1163

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>Sequence 1164

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>Sequence 1165

>Sequence 1166

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ATTCAGAGCTCTATCAATAAGAGGAATACATATTACAGTGAATTCGACAA
CCGCACAAGTTGGCAGTAGGTATCCCCAACCTAATTTATCTTGGTAAATT
CACCCTGTTTCCTAGTGCTGCTGGATAAAAGAGTGTTTACTTTTTATTGC
TCTTAGACAGAGTAGTCTAGATAAGTTTTCAATTTATCAACATAGCCTAG

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>Sequence 1167

GGTACTTTTCTGTCTTCTAATTTTTAAAATTATTAATGTCTTCTATTTTT CTAAGGCTGATTTTTCTAATGTCTGATTTTTCCTTTTTTTCACATCTTG ACATAAGTAGAGTTCATTTATTTTCATTTATTCTTGTATAATAAAATTAC TTAAGGTTAGGAATAATTAAGTTTTGCTCCCATGTTTTTATGTGTAACAA TCTCAATGTTGTATGTCATCTACTTCAAAATTTCAAGCTTCCCCTTTAAA ATACTGTTTAAAAAACTTTATGAAACCAGTATTTCTCTCAACCTTTGTGT AATACCTGGTTTTACTTTAATGTGGTCAAATAATTTAACCTGTACTGCAT CGGCAGTGCCTTCGGACTGTCTATTTGACCTGCAGTCCAACCTATGGCCT GGAACTCTTTTCTCATTCTCTTTGTTTTTGTGGCCACTTTCACAATGTAGA AGGAAAAAACCAAATGACCCCACTGTGATGTGAATGGCACCCAAATCAGA TAAGTTTCCCTGTAGGTTAACCTGCAGCCCTGCGTTGCCACTTGGATTAA CTCTGAATTATTTATTCCAAAAGTGCCAAAAATTTGAAATCTTGCTAGTG AAAAACTTGCTCTACTTTTTTGAAATGATCAAAAACCCCTAATATTTCAT ACTTTATACTTCTGTAAAAATAGATTTTCCATTCACAAACTGTCAGAAAC TTAAAAATACCTGTCCGG

>Sequence 1168

>Sequence 1169

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>Sequence 1171

GGTACCAACCCTATTTTACAGATGGGAAAACTGAGGCTCAGAGAGGTTAA
ATCACTTACACAAAGCCACCACAATTTTGAGTGGCAGAGCTGGAATGTGAA
TCCAGGCAGTCTGACCCTGCAGCTTATGTGCTTAACGATACTGCCTCTCA
TGTGGGCAAAGGATGGCCCACGAGAAAGGCAGGCCCAGATTCCAAATCTG
GCTTGACCGTCTAAGAGGCTGAGACTTAACCTCTCTGAGCCTTAGCTGTT
TCATCTAGAAAGAGGACCTCCTGACAGCTGCCTACTATGGTTGTTATGAG
GATAT

>Sequence 1173

ACGAAGACAGCATCCTTCAATCCCGCCAGCTCATGTGCATCTGAGGGTGG GGCTCTGTCTTCATGCTAGAAACCAAACTGCTCTCACAGCTTCCTGCTAA ATCACCACGGCTAACGGATAAGCAGAGACGACTACCCGCGTACC

>Sequence 1174

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>Sequence 1175

>Sequence 1176

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>Sequence 1177

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TTAAAATGAAAAGGTTAAAAAAGTTTAAAACATAACAGAATAGAACATAACC
TATTAAATAAATCTGAGTCCAGGCATGACACAGTGGTTCATGCCTGTAAT
TCCAGGGAGGGACTGGGAGGCCGAAGTGGCAAATCACTTGAGGTCAGGA
G

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>Sequence 1178

>Sequence 1179

>Sequence 1180

>Sequence 1181

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>Sequence 1182

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>Sequence 1183

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>Sequence 1184

>Sequence 1185

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TATTACCACATCAGCATTATATTAAAAGTGTTTTTAATAGTTGAATGTAT
TTTGCCAACTACTAGTATAGACTCAAATTTGCTATTTAATTTTTAAAATA
CAATTTATTTTGTAAATCCTTTAAAAAAATATTTGGTTAGTTTTGGATTAG
AAATGATTTATGTTAGCCATGTGTTGAAGATGAAATTGGCATCAGTGTAG
ACGGTGCTGATTG

>Sequence 1186

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TTTATCATATGCTAGAGTAAACTTACATTCCTTTCTTGTTAGAGAAAAAT
GATGGTAAAATCCATGCATTAATCAAAACTAAAAACATGAAAAGGCAAGC
CAACTACAAGAGAAATACAGTTGGCCCTTGAACAACACAGATTTGAACTA
CATGAGTCCGTGTACC

>Sequence 1187

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>Sequence 1188

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TTATGTGCTGGCTGAATGTATGAATTAATAAGTTGAGATTCGATCACTAG
TTGAAGTATAAATATATTTTTTGCAAGAATAAATGCTACAGTAACTGAT
TATGACAGCTAATTCTGTGTACC

>Sequence 1189

>Sequence 1190

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>Sequence 1191

>Sequence 1192

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> Page 219 (of 261 pages in Table 2)

TTATTTCTGATATTGGTTTAAATAGAAGAAAGAAAACCAAGCATC

>Sequence 1193

>Sequence 1194

>Sequence 1195

>Sequence 1197

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>Sequence 1198

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>Sequence 1200

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>Sequence 1201

>Sequence 1203

>Sequence 1204

GGTACTTTTTTCCTACAAATGAGTAATTGAAGAATTTTGTTTAGCCAGAC CATTTAATTCTCATCAATTGCATAATATTTCTAGTTAAATCCGAACTTCA TTCTATATTAAGTAACATTTTATTCAGATCCATATCTAAATAGCAATTTT GTGAGATTTACTAAGAATTTTTCCTGGTATGTATGGTTTTTGGTGTATTGG AATGTACCTGCCCGGGCGGCCGCTCAAGGG

>Sequence 1205

>Sequence 1206

>Sequence 1207

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GGGCACAGTGGCTCATGCCTGTAATTCCAGCACTTTGGGAGGCCGAGGCT
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>Sequence 1208

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>Sequence 1209

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>Sequence 1210

>Sequence 1211

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AAGGAACTTCCGCACAAGGGGCTGCCCAGCTTTGTGGGGCATTCCAGAGA
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GAGACTTGAGAAACCAGAGCCCAGAAGGGAAAAGTGATTGTCCCAAGATC
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AGCCTGGATGAGAACAGTGACCAGCAGGTGGACTTCC

>Sequence 1212

>Sequence 1213

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Sequence 1214

>Sequence 1215

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TTGGGCTAATGTTGACTTATAAATAAATAAAAATTTAGAAATATATTCAT
GATGACAATTTTGTTACTTACACTGCCTATTCTTTATTTCTTTTTTAGTT
CAAAGGTGAAATTTTGACCTTTGTATTAACAAAGCCTCAAGAAAAGAGAA
ATTCTGCCTTTTAAACATTGGTTTTCCTTGCATT

>Sequence 1216

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>Sequence 1217

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TTTATTGAATTATCATCATCCATATGTCCAGCACATTTTTAATAGGAAA
GT

>Sequence 1218

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ACAAAACAGAGGTATTTACAACAAACCACTTGCCACAGGGCCTTTGAACC
GTTTACCTAAGTCAAGTGTAATGAAAAACATAACCAAATGCACCATGGGG
TTTATTGTTAGATAATAAAAGGCTTAAAAAAGCCCCTAGACCCTAAAAATG
CCTGGGATGGATGATTGATGCTCATATGCTACTTGAGCATGTA

>Sequence 1220

>Sequence 1221

>Sequence 1222

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AACTCCTTTCTCTTCCTTACATCCAGGAAATTTGCTGTTTATTTTGAAAA
GCAAATTTAAACCTATTTAAGGGAGAGAGCTCTTGTAAAAATTCATTT
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AATAAATGCATAATACATTTGATGATAGAACATTTTTCTTTTTA
>Sequence 1224

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TTATTTTGGTATTGATCATTCGTTGTTGGTGTATTGAAATAGTCATAAAA
TAAGATCTGTATGAATTGTATTATCTTCTGTATCTTAAGTATTAGTGTAA
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ACCTGCCCGGGCGGCCGCTCTGAAGGGTCGATTTTCAAAAAAACTGTCTGC
CGTTTCTACTTGGATCCGAGACTCGAACTAAATCCTGGCGTTGTCATGGA
CATAGCTTTTTTCCCGTGTGAAAGTGTTAATCCGATGACAATTCCACACT
AACATTCTAACCCGTAAGCATATTTTTTTAACAGCCTTGTTATACTTGAGG
TTGTGCACCACACTCACATAAATTTCTTTAGAGCTTTGGGGCCCGGGTGTC

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>Sequence 1225

GGTACATCATTTGATGTATGTTTTTTGTTTTTTTAACATAAAAGGATTATA
TCCTTTTCCGCCAGCTGTTTTCACTCAATACATTGTGAAAATATTTTCAC
ATATGTTGCATGGGTTTCTATAACATTTGAAATGACTGCCAAATATTTCA
CTGTATGATCATCATTTAATATTATTATCAATTTTGTATATTTAAGTTAG
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>Sequence 1226

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CTTTGACATAACAGCCCCTGTCACTTCTTGTCACAGTTTGTATGTGTTGT
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TACAGTGTGAGGGGTGACACATTGCTGGATTCTGAGCTCAGGCAAATCTG
TCTGTGTCTATATTAATAGAGGTCTATCTTTTCTTAATACTGAATGCAAT
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GGTACTTTTTTTTTTTTTTTTTTTTTTTTTTTTTAGAGACAGAGTCTCCCT
GTGTTGCCCAGGCTGGTCTCAAACTCCTACGCTTGAGCAATCTTCCCCCT
TGGCCTCCCAAAGTGCTGGGATTACAAGCATGAGTCACCATGCCCAGCCA
ATAATGATTTCTTGATTGAAGGAATGAATGAATTAAAAGGTTCATCTTTG
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CTTTATTATAATATTAGTCTAAACAGGGGGACCCATGAATAAGCATGG
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AAATAGATGCGTAGATGATGAAAAAATGGAGCAGCTTCTTTTATTTCTTCT
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>Sequence 1230

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>Sequence 1231

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>Sequence 1232

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>Sequence 1233

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>Sequence 1234

>Sequence 1235

>Sequence 1236

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>Sequence 1237

>Sequence 1238

ACAAAGCTAGAAGCAGCCTGGTCCAGATGGCTATACAAACCCGAAACTGT CTACACCCAGACTTTATTCTTCTACAACCAAATTCCTCAAACACAAACC

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>Sequence 1239

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>Sequence 1240

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>Sequence 1241

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TGGGGCCAAAGAAGTGAAGACCTTCCAATCTTCCATATAAATATATA
AAATAATAAAAATAAGAGGTAACCTTCGGGCCCGGCGTACCCACCGCCTT
AAAGAGGGCCGAAATTTCTCAGGCAACACCTTGGCCGGGGCCCGTTTAA
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GCGGTTAAATTCAATTGGG

>Sequence 1242

>Sequence 1243

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TCACAATAACAAAAGGTTGACCCCTTGAGTTTCAFEFTCCAATCCTTTCTC
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TCCCTTTTTTTGTTCCC

>Sequence 1244

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>Sequence 1245

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>Sequence 1246

>Sequence 1247

>Sequence 1248

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>Sequence 1249

Page 227 (of 261 pages in Table 2)

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>Sequence 1250

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>Sequence 1251

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>Sequence 1252

>Sequence 1254
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ATCTATTGCTGACTTTTCCTCCACCTTCTCTACATCAGCAGCACCTAGGG
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GCACACTATTATCCAATTGGATAGACCCACATCTAAATGTCTGCAATTAC
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GGA

>Sequence 1255

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CCCATTTAGGGTCCAACAATAAAGCCTGTTCATTTACAGTGTCCAAATGA
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CCTGGCG

>Sequence 1256

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AGCAGTCTTTCTTCAGCTCACTTGGCTCTCTAGATCCACTGTGGTTGGCA
GTATGACCAGAATCATGGAATTTGCTAGAACTGTGGAAGCTTTTACTCCT
GCAGTAAGCACAGATCGCACTGCCTCAATAACTTGGTATTGAGCACGTAT
TTTGCAAAAGCTACTTTTCCTAGTTTTTAGTATTACTTTCATGTTTTAAA
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>Sequence 1257

>Sequence 1258

>Sequence 1259

>Sequence 1260

>Sequence 1261

>Sequence 1262

**GGTACACTCCATCAAGCCTGGTTCCTAGGATGCTGGACTTCTAGCTTAGT** 

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GAGAATGCAGTATACTTTTTGAAAACTTCGTGCAGGAATCCCTCAAATGC
TGTAACTAGGAATGGGTCAGTGAAGTTCAAACGACTTTTCCTTGAGGGAG
TATTTTAATCGGACAAGGGAACTCTTTTTCTTTTGGGCAATGGCCAACAG
GACTGAGAAGCCAGAGAGCTTGCACCTGAGCCATCTCAGCCGTGAGAGTA
ACAGTCCTAGGAAAATAGATGGGGGGCTGGGGGTAAGGAAATGTGCTGAAG
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>Sequence 1263

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>Sequence 1264

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>Sequence 1265

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>Sequence 1266

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CCACTTTTTAGTTTCCTCAAACATGCAGAAGTAATGAGGTTTGACAGAGA
CATGAGACTATAAGATGTCTGTCATTGCTGCCAACCATGGAAAAGATGTT
AAGATGTCCAGCTGCCCATAAAATCATATTTTCAAAGTGTGAGACACGAA
GAATATCTTTCTCTTATTTGGAAATATGCTGAAGATAGGAATAAAGAAAA
GGATTACAGTAAAATGGAGACGAGAGATACAGTAAAGCAGAAATGTATAT
GCC

>Sequence 1267

Secuence 1268

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**TAGAA** 

>Sequence 1269

>Sequence 1270

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ACCAAGATCAGAGCCAGACACCGGAAACCCCTGCCACACCACTAAGTTTG
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TTTAAACCAGCTCACACCAAAGGGACGGGATTTAACCGGTAATTAGGTAA
CAACTACAACCCATTAGTTACCTTGCCCCGGGGCGGTGCGCTTTAGGGGC
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>Sequence 1271

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GGAGCTCAGGATATTAAACTGAGTGGTGTCAAATATTCCCAGGATCAAAT
CGACAATGCCATTGTGTTCCTTGCCCGGGCTGGCCGCTCCGAAAGGGCCG
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>Sequence 1272

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GCTCTTCATGAATTGGATGCCAGAGTTTCGTGATGATCCTTTCAATGTTA
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TAGAACACTGGCTGTT

>Sequence 1273

>Sequence 1274

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>Sequence 1276

>Sequence 1277

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>Sequence 1279

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>Sequence 1280

Page 232 (of 261 pages in Table 2)

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>Sequence 1281

>Sequence 1282

>Sequence 1284

>Sequence 1285

>Sequence 1286

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>Sequence 1288

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>Sequence 1291

>Sequence 1292

>Sequence 1293

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>Sequence 1295

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>Sequence 1298

>Sequence 1299

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> Page 235 (of 261 pages in Table 2)

>Sequence 1300

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>Sequence 1301

>Sequence 1302

>Sequence 1303

>Sequence 1304

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TTTC

>Sequence 1305

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Page 236 (of 261 pages in Table 2)

>Sequence 1306

>Sequence 1307

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>Sequence 1309

Page 237 (of 261 pages in Table 2)

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>Sequence 1311

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>Sequence 1312

TTTTTTTTTTTTTTTTTTTTAAAAAAAAAGGGCAATTTTAAA AAAAAATGTAAATTTGCCCGGGTAACCCCCAAGGGAAAGTCCCTGACCC CCCCCAAAAACCAAGGCTTTCCCTTTCCCCAAATTTACCCGTTTTCCAA AAACCAAAGTTTTAAAACCTTTGAATTTTAAACCCCCCTTCTAACCGGAA TTTCTAAAATAAAATTACCCCCCCAATTTAAGTTTTTTTAGCCCAAAA TTGAACCAAATTAACCCCCGGGTTCTAAAACCCCAATATCCTGTTTTTGT ACCCATCCAATCAAGGTCCCTGCCCGGGCGCCCTTCTAAAGGGCCAATT CCCCCCCCTGGCCGCCCTTCCTTGTGGATCCCACCTTTGGCCCAACCTT GGCATAAACAAGGCCATAACCTTTTCCTTGGGAAAATTTTTATCCCCCCA CATTTCCCCCCACTTACTGCCCCGAACCATAAAATGTAAACCCCGGGGGC CCCCAATAAGGGGCCCCCCCCCATTTATTGGCGTGGCCCCTCCTCCCCC TTTTCCACAGGGGAAACCTTTCGTCCCCACTTTTATTAATAATACCCCCC CACACCCGGAAAGAGCCGGTTACGGTTATTGGCCCCCTTTTCCGTCTTC **CTCCTACAAGACT** 

>Sequence 1314

CCCTTGAGCGGCCGCCCGGGCAGGTACCTTCTTAGAAACCTAGACTCCAC AGAACACTGTTTGACAACCACTGCAGTAGAACATAATATATCAAGATTCT ATGAGTGGGTTTCTTCTTCATTTTTACATGTTGTAGAATAACATGCATA ATCAAAGCTAATAATACTGTGTTTTCTTTACTCTTTTATTTGCCTCTAAA GACATCCACACATAGTGGTGAACTGATTTTTAATGCGTTTTAAATAACAA GCATTGAAAAATATTAATAATTGTAGTTACTAAAAGTATTTCTCTTTGCG ATTCTCTTATCTGTGTTTCCAGACCGGTTGGAGGGTGACAGATCAGAATG CTCTGGTCAAGAGAATGAATATGAGGATGAGGAATAATAAACTCTCTTTG GCAAGCACTTAAATGTTCTGAAATTTGTATAAGACATTTATTATATTTTT TTCTTTACAGAGCTTTAGTGCAATTTTAAGGTTATGGTTTTTTGGAGTTTT TCCCTTTTTTTTGGGATAACCTAACATTGGTTTGGAATGATTGTGTGCAT GAATTTGGGAGATTGTATTAAACAAAACTATCAGAATGTTTTAAGACTTT TTGCCGTGTATGAAGAGTGCTAGAAAATGCAAAGTGCCATATTTTCCCTA ACCTTCAAATGTGGAACCTTGATTCAATGGTGAAAATAATTTCATCATAG TGAAATGTTGGTTCAAAATAATTCTACACTTGCATTTGGAATGTTGTTGC TTTTATATAAAGAGACTGGTTGT

>Sequence 1315

>Sequence 1316

>Sequence 1317

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>Sequence 1318 GATCAATAAGTTTATTTATGTTGCATCACACAATAGTTACACAAGCATTA AAAACACATGCACACGTGTTTATTATACCATACATACAAACACACATACA ACTTAATATTTACAAGCACATACAAGCACATACAAACATATAAACAACAA ACAACACTAATTTAACATACATACAATACTTACAGCTTACGTTTTTTGCG TTTAGCAGTTGTAGAGGTAGATGAGGCGGTGGGTGTAGCTTTTCGTTTTC CTAATGTAAATTTTGGTTTGGCCATTAATCCTGCTTGTAGTAAAAATTTG CGTCCTAAAGGAAACTGATCTAGGTCTGCAGAAAACTTTTCCTTTAAATA TACTGCCCAAAAAGAGTATTTTTTAAGGGGATCTTCTTTAGGTGCTGGAA GTGTATTGTTTTGACAAGACATTGCCTGGGATGTTACAAAACCTTAAGTA TCTTTTAAGGGGCCTCCTGGGGGAGGTTGTAAACCAAAATTTCAGACTTC CAAAATAGTGGAATGCATAAAATGTTTTTTATTTTATAACGTTTTCAGTT AATGTTATTTTCAAAATTGTAAAAAAAACTGTAAAAATTTTTCATTCTAT GGTGGAGGTACTTGGGCCGCAACCCTCTTAAGGCTAATTTAGCAAACTTG AGGCCTTTCTAAATTGTTCGAATTAGGTCTCTAATCTTGTTATAAATTAT ATATATCTGAATG

>Sequence 1319

GGTACATGAAAACATCAGTGTGACAGTTAATATAAATGTCAACTTGATT
GGATTGAAGGCTGTAAAGTCTTGTTTCTGGGTGTGTCAGTGAGGGCGTTG
CTAGAGAAGACTAACATTTGAGTCAGTGGACTGGGAGAGGAAGACCCACC
CTCAATATGGGTGGGCACCATCCACTCAGCTGCCAGCGAGGCTGGAACAA
AACAGGAGGAAAAAAGGTGGGATAGGTGACTTGCTGAGTCTTCCAGCTTTC
ATCTTTCTCCCCTGCTGGATGCCTCCTGCCCTTGACATCAGACGCCAGGT
TCTTTGGCCTTTGGACTCTCAGACTTACACCAGCGGTTTGCCGAGGGCTC
TTGGGCCTTTGGACTCGAATGCTCTACAGTGTTGGCTTCCCTACT
TTTGAGGCCTTTGGACTCGGACTGGGCCACTACTAGCTTCCTCCTC
AGCTTGCACGTGGCCTATAATGGGCCTTCACCTTGTGAACATGTGAGCCA
ATTCTACTTAACAAACGCCCCTTTATACATACATATATCCTATTAGTTCT
GTCCCTCTGGAGAACCCTATACACTCGATAAAAATTTTAA
ATAT

>Sequence 1320

>Sequence 1321

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>Sequence 1323

>Sequence 1324

GGTACTTGGTTTAGTTATGGCTGTTTTTTTGCCTCTAACACTTTTATTTTA
AAAAGAAAATTAAAATAGGTTATTGGGATCAAAGATATAGGCTTTTTGTT
ACTTTGAATGATTTTTGTAATTCAGAATATGCACTTGTTATTTCAGTTCT
TATTTTTATAATTATTGGTAGAGTTCATCTAATTACCCTATAAATCCCTG
GAGAAAGGTGGCCCCCATATACTTTATTTCTTGGTTATATGTATAAAAAT
CAGTAGGCAATGTAAAAAATGTTTTTTGTGTGAATTTATGTGAGTTATAATT
CTAATTCTATGTCAATATTCACCTCAGATTACCACATGAAAGCTCAGTCA
CCAACTATGCCTCATACTGAAATACCCACTGATTAAATCAGTTGACAACC
AGCTCCTATCGTACCTGCCCGGGCGGCGCCGCTAAGGG

>Sequence 1325

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**ATTTAATTTTTTAAGGGATT** 

>Sequence 1326

>Sequence 1328

CCGGGCAGGTACCGGAATCTGCAGATCGCCAAGATTTTCTATAATGATGC CCTCCTCACGTTTGTCTGGAAACTGGTTGTGAACTTCCGAAGAGGCTTCC GGAAGGAAGACATAAATNNNCCNANACGAGGGGGGACATAGGAGCTCCAC GACNNTNTCTTCTATTACTCGGCANCCCCCTGCAAGCCTCTCTTCATCTG GGGCCATTCTTCAGCAATNAAGAAGGGCAAACTCTCCAAAGTTCATTTTG GGTAGCCAGAACCAGGGGGCTGCCACTTCTGGCAAGCCCCTGGGGAGCCC AGGCAAGGCCTTCATGGAAGAACCTCTTGGCCAAAGGTTGAAGAAACGAA CAATCATATGCCTGNCATGGGGAGGTCCCGAGGAAGCCCTGGCTGAATGA GGTACCCTCGGGCCCGCTTCTAAGAAACTAAGTGGGAATTCCCTCCGGGG CTGGCAGTGAAATTTTCGATTATCAAAGCCTTAATTCGAAATACCCGTCC AACCCTTCGGAGGGGGGGGCCCCGGGTAACCCAAGCTTTTTGGTTTCCC TTTTAGTTGAAGGGTGTAAATTGGCCGCGCCTTTGGCGGTAATTCATGGG TCAATAGGCTGGTTTCCCTGTAGTGGAAAATTGTTTATTCCGGCTCAACA ATTTCCCACACAACCATTACAAGCCTGGGGAGCCATAAAAGTGGTAAAAG CCCTGGGGGTGGCCTAAATGAGTTGAGCCTAACTTAACATTTAATTGGCG TTGGCGCTCACCTGCCCCGCTTTCCCAGGTCGGA

>Sequence 1329
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CTCAGCTCCAATCTATGTGAAAAACATTCTCCCCCGGGGGGCGCCATTC
AGGATGGCCGACTTAAGGCAGGAGACAGACTTATAGAGGTAAATGGAGTA
GATTTAGTGGGCAAATCCCAAGAGGAAGTTGTTTCGCTGTTGAGAAGCAC
CAAGATGGAAGGAACTGTGAGCCTTCTGGTCTTTCGCCAGGAAGACGCCT
TCCACCCAAGGGAACTGAAAGCAGAAGATGAGGATATTGTTCTTACACCT
GATGGCACCAGGGAATTTCTGACATTTGAAGTCCCACTTAATGATTCAAG
ATCTGCAGGCCTTGGTGTCAGTGTCAAAGGTAACCGGTCAAAAGAGACC
ACGCAGATTTGGGAATCTTTGTCAAGTCCATTATTAATGGAGGGGCAGCA
TCTAAAGATGGAAGCTTTCGGTGAATGATCAACTGATAGCAATTAATGG
AGAATCCCTGTTGGGCAAGACAAACCAAGATGCCCTGGAAAACCCTAAGA
GGTCTATGTCTACTTGAGGCCATAAACGAAGAATGATCCCGCCTTCC

ACCGTGTTTTGATAGTTGACTAACACTGACCTGTAATGGTCCTACACCCT CTCCACTTACTTACACTATCTTAGGTAAATAAGACTTTTATTCCTAAGTG TGAATTTTCACAGGAGGAGAAATCTGGCAGATAGATCCTCACCATCATCT

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>Sequence 1331

**GGTACTGTTTGCATTAATAAATTAAAGCTCCATAGGGTCTTCTCGTCTTG** CTGTGTCATGCCCGCCTCTTCACGGGCAGGTCAATTTACTGGTTAAAAGT AAGAGACAGCTGAACCCCCCGCGTACCACTGTAATCATTATTCCCAATGT TATGATTACATTGACAGATAACTCCAGTTTTGCTAACCTGAACTGATGTT ATGGCCATAATATGTTGTTGATTCATGGCAAATGGTGATGTGTGAGTTAT GATCCTGTTTTTCTCACAATGGTGGTGGAGGCCGGGAGCTTATATGTTTA TTTATGTATGAATGACGATAGTAAGAGATGGCATATAATCACCAGACTGA TCATATTGGATTCTTTGGGGAACGGAGCCGGAAGGGAGTAAACAGAGAAG CTTGACTCTTTATATATCTGTAATCTGCGGCTTTTTACAATGAGCATGGT ATTTTAATATTTTTAAATATCTGATTAAGAAACTTATGAAAGAGCCGTNT TTTGAGGTTTAGTGCTAAAATAACACTTAAATGTTATTCTTAAACAATGC ACTCAGGGAAAACCATGCTCCCAGGGGGGAATGAAATCTAGTGGTCCTTT AGTAAGTCTTTAAAAGACCCTTCAAAAAATTTTTTGTGTTCACTTTATAG TAACCCACACCCTCTTCCCAAGATTGCCTAAAGGGGTGGGGATGGTCGGG CTTTATAATATTTCGGCAATGGAATTTGTGGATAACGTTTGGAACGGGAT **AATCTTTGGG** 

>Sequence 1332

>Sequence 1333

>Sequence 1334

>Sequence 1335

ACAATAAACCAGCCAAAGAAAATAACCAGTTAGCACTTAAATAAGAATCT ACCATGTAAAAAACACAGTATGGGACACTACAAGGTAGTATTTATATATT TTTTAAATGACTGAGCTACAGTACC

>Sequence 1336

CCCTTAGCGGCCGGCCGGGCAGGTACATCTATCTGACCCCAGAGTTACCC TTTTCTATCATGCCCCGTAGGATATTGCCTGGGGACACCTGACAACAGA AAGTCTAAGGTTTTCATCTAGGATTGGGAGTTACCCCAACACCAGCAGGA TGCAGGAAAAAGTAACTGACCGGATGGTTGCCTCAATCTGTTGATTCTTC

> Page 243 (of 261 pages in Table 2)

>Sequence 1337

>Sequence 1338

>Sequence 1339

ACTAAAAATTTCCACTATCAGAAGATCCTGATTAAAATAAAGAAATACAT AAAACTCAAACAGTAAGTCAATGTGATTATTTGTTTCATTTCAGAAGATC TATGGGTCCCACTGCCCGCCACACGTGTCTCCTGGTTCTCAACGAAGTGT GACCAGCTCTTCTGAAGAGGTAGGGTGAATGGCGACTGTGTTGTCAAAGT CTGCCTTCGTTGCTCCCATCTTCAGTGCAGCAGCAGAGCCCTGCAGCATT TCATCACACCCAAGTCCCTGCATATGGATCCCAACCACCTTGTCTTACTT GGTGGCACAGACCATTGTGATCACACCATTGTGGGTTTGCTTTTGGTACC TCGGGCGGGAGCACGCTAAAGGC

>Sequence 1340

GGTACTTTTAACTATTTGTTTCTTCTACGATAATTGGTTTGTTGTGACTT
TATCTACCTAGAGTAAATTTTGGCAATTTTGCATTTTTCTCAAAATAGTTT
TTGAATTTATTGTGTAAAATTGCTCAAAATAGTCAATTTAAACAAATTTC
CTGTTTTACTATTTCCCCCTTGTCATTTAAATTTTTGTATTTGTGCTTCC
TCCCGCGT

>Sequence 1341

ACTITGACTATTTTTTAGCAACAAATTACTTTTGACACACAGCACAATTG
ATTTAACACTTCCAATTTTGGAACTATTGGATAAATAATGATGGGATTTA
AATAAAGCAATCCGATTCTACTATTACAGCATAGGGTCTCTTGTAGTCCT
CTTAGTAAAAACTATTGTGACACTTCCTTCTTTCTCCAAATATTCGGCCT
GGAAAGACCTAAATACAATGCAGGGATTGAATCAAATTCACACATTTTTT
TTCCTACGGAAACAACAACCTTTCTTGCTTATATTTAACAAAAACTAGTA
TAGATT

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>Sequence 1342

>Sequence 1343

TGTACTATAGGGAGTCGACCCACGCGTCCGTCCAGAATTTCTAGAGTGGG TGGGCATGATTCCAGTCAATGGGGGACCGCCCGTGTCTAAGCATGTGCAA AGGAGAGGAGGAGATGAGGTCATTGTTTGTCATTGAGTCTTCTCTCAGA ATCAGCGAGCCCAGCTGTAGGGTGGGGGGCAGGCTCCCCATGGCAGGGTC CTTGGGGTACCCCTTTTCCTCTCAGCCCCTCCCTGTGTGCGGCCTCTCCA CCTCTCACCCACTCTCCCTAATCCCCTACTTAAGTAGGGCTTGCCCCAC TTCAGAGGTTTTGGGGTTCAGGGTGCTGAGTCTTCCCTTTGCTGTGCCCA GGTCATCCCAAACCCTTCTGTTATTTATTAGGGCTGTGGGAAGGGTTTTT CCTTCTTTTCTTGGAACACTGCCCCTGTTCTTCACACTGCCCCCCATGC CTTAAACTCATACAGATTGTCCATCATGGGGGGCATGGGTGGAGCAAAAG GGCTTCCTTAACCCCGGCAGGCCAAGGCAATTGGTAAAGGAAGCACTTGC CCCCCTTCTGGCCCCTTCTTAATCTTTAATAAAAAACCCGGCTTCTTAT CGCCCCTTTGACTTATCTTAGAGAAAAAAACATTTCCAACCTTCCCCTT GAACCTTGAACCATAAAAGAAATCCATTTTTGGTTGTAACCTGTTATTTG CACTTAATAAGGGTTCCAAAATAACAATATCCTTCCCAATTTTCCATATA AGCCATTTTTTTACTGGCTCT

>Sequence 1345
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CGGGCCCTCTACTGGGGCCAGGGAGCCCAGGTCACCGTCTCCTCAGCCTT
CACCAAGGGCCCATCGGTCTTCCCCCTGGCACCCTCCTCCAAGAGCACCT
CTGGGGGCACAGCGGCCCTGGGCTGCCTGGTCAAGGACTACTTCCCCGAA
CCGGTGACGGTGTCGTGGAACTCAGGCGCCCTGACCAGCGGCGTGCACAC
CTTCCCGGCTGTTCTACAGGCCTTAGGACTTTACTTCCTTAACAGCGTGG
TGACCGGGCCCTCCACAACTTTGGGCACCCCAACCTACATTTTTCACGT
GAATTACCAGGCCATCAACCCCAAAGGGGCAAGAAAGTTGTGCCCAAATT
TTTGACCAAGATGATACATGCCCACCGGCCCCGACCCCTAACCTCTGGGG

**GGGCCGCAGTCTTTCCTTTTCCCCAAA** 

>Sequence 1346

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TCCATTTTTGATACATTAAGCTTGGTATGTTTAATTCATAGCTATATAGA GGTATTAAATTGGCAGGACAAAATCATAGCTAGAGATAAAAAATTTAGAGT TCACCAGTGTAAAGATGATATTTGATGGCACAGGATGGACTTTCTTCTGG GATTTGAGTATACATAGAGGAAAGATGTGAGGATTGAGCACCAGGGGACT TCAACATTGACAGGCTCAACAGAGGAGAATTCCCAAGAGGATGAGGTTCC ACCTTTAGGACCGCCAAAGAAGACTTCCCAGACAAGTACCTGCCCGGGCG GCCGCTAAAGGG

>Sequence 1347

GGTACTTTTAACTATTTGTTTCTTCTACGATAATTGGTTTGTTGTGACTT TATCTACCTAGAGTAATTTTGGCAATTTGCATTTTTCTCAAAATAGTTTT TGAATTTATTGTGTAAAATTGCTCAAAATAGTCAATTTAAACAAATTTCC TGTTTTACTATTTCCCCCTTGTCATTTAAATTTTTGTATTTGTGCTTCCT CCCGCGT

>Sequence 1348

>Sequence 1349

TCCCCCCAATGGGCACGGGTTTAATTCCCAAATTTTTAATTTTTGGGA TTGGGCCAAAAAAATCCCCCCCTTTTTTTCCCTTTTTAAAAAACGGAAG TGGGGCCTGCTTTTTAATTCACCCTTTTAAAAAAAATTCTGGAGGGTTTC CCAATTTTTTTAAGGAAATTTCCCGTGGAAATTTTTTAAAAAAGGGAAA AAAAAAAGGTTTTATTTTTTTGTAGGGCCCCCACCCAGTTGGTGGGAAA AGCCCTTTCCCCAATTTTTTCCCCCTGCGGGCAAAAGGTTTTTTTAAAA AAAAAAATTTTTTTAAAATCTTTTAAAAATTGGTGGTTTTGAAATTTAA CAAACCGTTTGTTAGCCCCCTTGTAAATTGTTTCCAAACCCAAAAAAAGG TTTCTCCCCCGTATTTCTTTGGCGGGAACCACTTAAGGGGTATATTCCCC **AATCTGGGGGGGTTTTATATAAAATTCAATTGTTAACACAATTTGGGAAA ATAGGAAATAATTG** 

>Sequence 1350

>Sequence 1351

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>Sequence 1352

>Sequence 1353

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>Sequence 1354

>Sequence 1355

>Sequence 1356

>Sequence 1357

ACAACACTTTAAAAAGTGAATTTTAAGCTATGTGAATATCTCAATAAAAA CATTTTTTAAATAAAAAACAATTCCCAAAGGCCTGGAAATTCAGGAACATA ATTCAAAAATAATTTATGGATCAAAAAAATAAATCATATAAAGATCTGAGAA CTACAATGTAAAAAATAGAAAAAAGTCATAACAATATTAGAAAAAAATT TGAGCTGGATAACAAAAAAATAGTACC

>Sequence 1358

**GGTACTTACATGGAAATAAGTGTTAAGAAAAGGA** 

>Sequence 1359

GGTACAAAGAAAAAGCTAAGGAACGGTATGTATATTAATCCCTTTATTAA AAATGTAAAAAGCCAAAAGCAAGATAGACGCAGATATGTGCCAAAATATG TATTTTTTTTTCCTGGAACAAATCACAAGAAATGTAATAACAGTTACAGT GAGAGGAGCCTTTGACATCTCTTTCTAAACTATTTGATATCATTTGTATA CTAACGATGT

>Sequence 1360

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>Sequence 1361

>Sequence 1362

>Sequence 1363

GGTACATTTAAAAGGTGATGCTAATACTCTAAAATGTATAAGATATAGAT GTAAAAAGCATTGTAAATTGTATACTGCAGTGTCGTCTACATGGCATTGG ACAGGACATAATGTACAACATAAAAGTGCAACTTGTCACACTTTACATAT CGATGAGTGAATCGGCAACTACGACCAATTTTTGTCTCAAGTCAAAATAC CAAGCACTATTGCACAGTCTACTGGATTTATGTATATATGACATATCTGG ATACTGCATGCACCACATTATTGGCGGCCTTTTAGCTAAGCTGTAGAGTG CTATTGTGCGACCGCTTAGTGATACTATTCCTGGT

>Sequence 1364

>Sequence 1365

>Sequence 1366

>Sequence 1367

ACAATATATTATGAAGCATGACCACTTTATTTTGAAACTTAGCAATTGTA TTGCTGGGGTTTATTGTATCTGTAGCATGTCACTGATTATTTCAGTTAGT

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# Table 2

TTTATAATGATTTTTAAAAAACATATCTATTTGGAATAAGATACAGCAAC AATCATTGCTATTGACTTGTTCAACCCCTTAGTTACACTGTATGATCAAC ATATAACAAGATACAGTGGAATGGCCCATACAGTATATTACTGTTGTGTG ATGATTGGCTTTGGAAGCAGTTTGATTTTGAAATGCTTTGATATTCTAAT TGACATGGAACAAG

>Sequence 1368

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AGTCTCAAGAGGTTACTGCATTTCAGTTCTAACTAGACATTTGTACTTGT
GATCACACTACGGGAATCTCTGTGGTATATACCTGGGGCCATTCTAGGCT
CTTTCAAGTGACTTTTTGGAAATCAACCTTTTTTATTTGGGGGGGAGGATG
GGAAAAAGAGCTGAGAGTTTATGCTGAAATGGATNTATAGAATTTTTGGA
AATCTATTTTTAGTGTTTTGTTCGTTTTTTTTAACTGGTCATTCCTT

>Sequence 1369

>Sequence 1370

>Sequence 1371

ACTGTCGTTTCCTTCCTACCTCGTCCTCACCCCACCCCGAGTGAAACTTT
TCGAGTGTGAACCTTACTTTTTTCCCGTTCTCCTCAAGGCAGTTTGAACG
ACACAGGTTTGGAAGGAATAGTTAACTCTCCAGTATTATTGGAACATCTG
GACACCACCAACAAAAAATCTTAGAAAAGGGTCATTTAAGGCCTATAAAA
AGTGCCACCTTTCCCAGAATTAATTCAGAGAGAAAAATCTTATCTGCCTC
CTGGCAGCTACAGCGCAGAAAGTACC

>Sequence 1372

>Sequence 1373

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AACACCAGTTCTCCACACTCTCCTCTAGAAGAAGAGGAGGATGGAATACC
TTCCCCCTTAATTTATGAGGCCAATATTACCCTGATGCCAAATCCAGACA
AAGATATTGTCCCCCAAAATAAAACTAACGATCATAGATAAAATACCTCTT
ATAAATTTAGATGCANAATCTTAAGCANAATATATTAGCANAATGAATTC
AACAATGAATAAAACATATTATACACCAAGTGGGATTTATTCTAGCTATG
CAAGACTAGCTTGACATTTGAAATTGATTA

>Sequence 1374

CCCTTTGCGGCCGCCCGGGCAGGTACTGGGAATACAGGCATGAGCCACCG CACCCGGCCAGAAATTATAAATCTAACCAGGATTCCCAAACCTACAATAC AATGGAAATATCATATTCTCTCTTATAGGGTTTTTTGGGTTTTAACCCAAT

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>Sequence 1375

ACGCGGGGGATATGATTGGCCGGCGAATCGTGGTTCTCTTTTCCTCCTTG GCTGTCTGAAGATAGATCGCCATCATGAACGACACCGTAACTATCCGCAC TAGAAAGTTCATGACCAACCGACTACTTCAGAGGAAACAAATGGTCATTG AATGACCTTCACCCCGCGAAGGCTACAGTGCCTAACACAGAAATACGGAA AAAACTAGCCATAATGTACTTTTGTCCGTTACCACGCTGAGGGCCGATTT TTTGCCCACTAACCGGTCGTTACTAGTGGAGACTAGCGACGATTCCAAGT TGTCATATTACTCGATATATCTTA

>Sequence 1376

>Sequence 1377

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>Sequence 1378

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## Table 2

ACGCGGGGTGAATGGAATGCCTTGCAATATGAATGTTAATATAATGTGTA **AAGTACC** 

>Sequence 1380

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>Sequence 1381

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>Sequence 1382

ACCAAAATTCATTCAAGAAGAAATAGATACCAGCCTGAGCAACATGGCAA AATCCCATCTCTACAAAACATAAAAAAAAAAAAAAATTAGTCGGGCATGGTG GTGCACACCTGTAATCCCAGCTTGTCAGGAGGCTGAAGTGGGAGGATCAC CTGAGCCCAGGGAGGTCAAGGATGCAGTGAGCCATGGTCTCACCACTGCA TCGATAATCTGAATAGCCCTATATCTATAGAAACTTAATAGTGCTGGGAG ATATAGGTATTATCCTCATTTTACAGATGGGAAAATTGAGGCTCAAA GAAGAAAAGTCTATTGCTCAAGGTCATGTGGCTAGAATATGGCAGAACCA TGATTCAGATCCAGGTCTTCTGAATCTTATTCCAGGGTTCTTTTTAGCAT ACCATGTTGCCTCTAAAGAATGCAGCTTCTTAATTACTAGAAAATTGTGC CTGGCCAATTTAAATGTGAAATTTAACCCATTTTTTGTAAGCACTATGGT GGGGTTTTAGAAGCATAATTTAATGGCTTTGGAATACAGGTGTTTGGTTT GGGAAAGGAAAAAAATCTTTTTTTCCAACTTGGACTTCGACCAAACTGG GAAAAAAAAACTTAAAATGTTGGTGGTTTGTACCCCGGGCCAGAAACCA CCATATGGGGGGACTTCTCTATTTGG

>Sequence 1383

GGTACTTTGTGTTGGTATCCAAAATTAGGACTCTGAGATTCTTGTGT ATTCAGAGAATTTTTAGTAGGAAACAGGACAAATTTGCATATGAAATGAA **AATAGTTATTACATGACAAAATATGTAGATC<u>TGAT</u>TTCTAGAAACTGAAT** TAGTCCAAAACAAGTAAGAGTGGGAAAAGCAGTAAAAAGTTCTTCTTGAA TATTGCTGTTGTCATCCAAAGTATTCTTATTTCTTTTAGGTGAAAAATTT CCATTACTCTTTTGTGATATTCTCAAAAGAAAGTTTAGGATTTTACAGTG TTCTGAAATACTGAATCTTAATTCAATATTTCAATAGAGTATTATTGATT TGCTTCCTTATCAGTAGATTTTTAAATTATTTATTTCTAGGCTATAGATC TTCCTAAAATATAATCCAAAGTAGTTTAAAAAGCAGATATTTAAACCAAA GTATAAAGATCTTTTTCTGGAGCATGCTATATTTAACAGTTTTTTCCTA

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>Sequence 1384

>Sequence 1385

TTTTAATTTATTGAAATITGGAAAAAAATTAAAAAAAAATGGGGGGG AAAAAATATAAATGGGGGCCCCCCCCAACAAAAAGAAAACTGGGGGGA TAAAAAACAGAAAAGGGGAAAAAAAAAAGATTTTTTTTCCCACGGGGGA AAAAAAAAAAACCCTTTTGGGCCCAGAGAGAATTAAAAAAGAGACACCA TATGTGGTTGGCAAGATTATAATACAAAAAAACAAAGAAAAGATTTGGTG ATCATGAAACCAAAAATATTTGAGAAAAAAAAAAAGATTATGTGGCGCCCA CAAATTTGAAAAAAAAAATAGAGAAAAAAAAAAGACCCCCAGGAGTGGAG AATCATTTTGAAGAAAAGAAATACACCCGTAGGCGGGAGAACCCGTTAA AAGAGGAGAACACCACCGCACGACGAGGACGTGGATAATAAAGAGAAGA CAAAAACTGATCAAAAGGTGGAAGAAAAAATATGAGGAGAACAACATGTT CCCCAAAAAAAAAAGATCCTCGCCCAAAAAAATATCACAAACAGAGGAC GCCCAAAAAAAAATAAGGACAACCCGTGGGGGGGTTCAAAAAAAGAGAACA TCACCAAATATTGGGGCCCGCCACCCGACCTATTAA

>Sequence 1386

>Sequence 1387

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>Sequence 1388

GGTACTTTNTTTTTTTTTTTTTTTTTTTTTTTTTTTGGTAGTAAAAATATCCCAATCTC
TTAAATGTATAGGTGAAAAATACTTAGTTTCGAAATGATTCCTTAAAAAG
CAACAATAAAAATACTCTTCTTCACTTGAAAGAAAAAACCCAAAAGGCAG
TGTTCATACAAAGTCATGAAGAGAATTTAAATTAAGGTTTTTGGTTCCACT
TTGTCTCAACTTTAACTTTTAACAGTTCTTTATAGGCTTTTGAAACCTAC
TTTGGAGAAGGAAAAAAAGTAGGAATAACTGTTCTTCAAAAATTTTACAA
AAACAGTTTGACTCAGCTTCAGTTGTTAAA

>Sequence 1389

GCATCGCTCTTTCTCCCAGGCTGGAGTGCAATGGTGCTATCTTGGCTCAC TGCAACCTCCACCTCCCGGGTTCAAGCTATTCTCATGTCTCAGCCTTCCA AGTAGCTGGGACTACAGGTGCCTGCCACCATGCTCAGCTAATNTTTGTAT TTTTAGTAGAGATGGGGTTTCACCATGTTGGTCAGGTTGGCCTCGAACTC CTGATCTCAGGTGATCCACCTGCCTCGGCTTCTCAAAATGCTGGGATTCC TACCGACCGTATAATTGCCAGGTATGCTTTTTGTGGACAAACTTCTTTTTT GGGGGAAAAAGGTTTCCTTCAATCTTTTTCACTTTTGGTCCAGTTCCGG GTTATCCCTGTTTTTTTTTCCACTTTTCCTTCCTTGGTACATGGGGAGT TTTTCTTGAGGGCTTTAAAGCCAAGTCTTGGAAAAATCCCGGGTAGGGGA ACATCAAATCCCCTTTTGGGGTCTTTTTTATACCCAAACCTTTACCCCCT AACACCTTCCGGGGTTTGAAAATGGAAAAGATAGGGGTTTTTCCCTAAAA AGTTGGCCTTTCTGGTGGGGGGATGAACCGGGTTTAAAACACTTTTTTTG TGGGCCCCGCCCTAATTGGCAGGAATAAAAACAATTAGAGCGGCCCCG **GGGGTTTATAACCACCAACACCT** 

>Sequence 1390

CCCTTCGAGCGGCCGTCCGGGCAGGTACTCTCAAAAGCTAGGGCTGATGA CTGAGCAACTACAGAGCCTGACTCTCTTTCTACAGACAAAACTAAAGGAG AAGACTGAACAAGAGACCCTTCTGCTGAGTACCCTTGCCAAGATGTCTGC ATATGCTTTGCCGACTTGTCTACTGAGTTAGACAAACTTGAGATTGTTTC CCTTTCTTAACACAGATTTGAAATGTAGGAGACAAATCCTAGCGGATAAA ATGACATATCTTTAATATGAGTACTGTGGCAGTCTCACATGGAGGTCACG AGTAACAGACTCAATGCCTAAATAGCTGTTTACCACTGCTTTTCTGAGCA ATATTTAACTTATACAGACTATAAAGGAGCAGGCCAAATGGTGAGGTTTT TAAAGGATGTCAAACACTGTTTTAACAATACGAAGCCCCATAGTTTAAAA GGATATTCATTCCTATTCTCAAACAATATGGAGAATTATCCATCTGAGAA TCTATTGGGTGTACAGACCCTTAGTAAAGGAGGGGTCCTTAAAAAATTTG TATGGAAAACCCAGTTGCCCTTAATTTCCTAACCATTTTTATGGGATGTA TCCAGATCGAGGGCACCTTATGGGGGCCGCATTCCAAAAATAAGGGTAA CAGGGAACCCCCAAATTTGAAAATAGGAAAAACTTGTGGCCGAAGAAAGT TTTAATTTTTGCCCCCTCTAATTTCGCAAGGTGAGTTTCGTCCCTTTGTC TAAAAAAAT

Page 253 (of 261 pages in Table 2)

>Sequence 1392

TGGCGGAATTTAAAAAATCCCCCTCTAATCAGAGGGTGGAAACCCCTACG GTTTTAAAGTTTT

>Sequence 1393

>Sequence 1394

>Sequence 1395

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#### Table 2

CCTTTGGGAAACTTTTTTACTTATGGGCCAAAAACCTTTGTAAAATTTAT CTTTTTGAAAATTTTTTAGGCCCCCTTATTTATAAGGGTTCCCAACCGGG GATATTATTTTTATATTTTTTA

>Sequence 1396

CACATGTGTCGCCTTAAATCATCCAACCTTTCAGTCACTACTATGTGTAA GGCAGTCTGCTAGGTTCCAGGAATGTGGGGCTAAGTGAATAAGATGCAGC TCCTTACTTTAAGTCTGGCAAGGAAGATGCATTTTTTACGTATCTTCCAC AGTGCATTGTGAAACATGCCATAAGGAAGGGATAAACACTGATGACAAAG TAATTGCCAACTNTTACTAATTTTGTCAAATTTCAGAGAGGTACC

>Sequence 1398

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CACTGCAGATGTAATAAGTTGAGGATCTCAAGATGAGATCATCCTGGATG
CAGGATGGGACCTAACGATAATGGCTGGCGTCTTTATAAGAGAAAGGAGA
ATGAGATTTGAGACGCAGACATGCAGAGAGGAAAGCGACATGGAGACGGA
AGCAAAGCCTAGAGTGGTTAACCTACAAACCAACGGTTGCCAGCTGTCAC
CAGAAGCTGGAAGAGAGGCATATAAGATTCNTCCTTAGAGTCTCTGGAAG
AAACCAACCCTGCTGGTGTCTTGATTGCAAGCTTCTGGCTATTAAGAAGT
AGACTTCTTGCCTTTTAGAACAGATATCTGTTACACACAAATGGGTAGTA
ATTTTTTAATGTCANGCCTTAAGAAAACTGATATATTAATGTAAGTTTCC
CTGTGGGGCTCTACGGGCCAAATTCTTTTGGTTCAAGAGGCTTGGTAGAA
TGGTTACAGGTACCCTTTGGCCGGTAACCACGCCTATGGGGCGAATTCCA
ACAACAATGGCCGGCCCGTTCCTAATGGGATTCGCGACCTCGTTACAAAC
CCTTGGCGGAAACCTGGGGCAAAACCTGGTTTCCTGGTGAAAATTGTTA
TCCCGCTCCCAAATCCCAAACAATATAAACGGCCCCGAAGGCTGTAGCTGT
AAAAGCCGGGGCGGCCCCAAATAAAATTGCGCAACCACAATAAAAGCGGTTGG

>Sequence 1399

GGATAAATAACTTGTTACCCTGGGACTTTAAGGGTCGGGCACCGGGAATA GGCCACCTTAAGGGGGGTTATCCGTGGGTTCCCACACCTCGGGGATAACC CCAGAAAATACATTTTTGCCAAAGGCCGCAAAGGCCCTGAACCTTTAAAA GGCCT

>Sequence 1400

>Sequence 1401

**GGTACTCAATCAGATGTTAAATTCTTCAATGTAAATGCTCTGTCATGCCA** 

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#### Table 2

TCCTACCTCCTGTCTCCCCCACCCCTCACACACACCCTAAAAGCACTC

>Sequence 1402

>Sequence 1403

>Sequence 1404

>Sequence 1405

ACCTGGCTACAGTAAATGCTCAAGGCCCTTTGTTATTATTTCAGATGGTC AAGAATAAATGTTTTTCAAGGATCTTCTTTTTTGTAGACAACTGTGTAGTC ACAGTTTAGAGTCGTAAATTATCTGCCTGGCAAGATACTTT

>Sequence 1406

GGTACATACAATAGAGTATTATTCAGCCTTAAAAAGGATGAAAAAATCCT
GACATGCTAAAATATAAATGAATGTTGAGAACATTATGCTAAGTGAAATG
AGCCCATCTAAAAAGGCAAATACTGTATGATTTCACTTAACTGTGATATC
CAGAGTAGACAAATTCATAAAAACAGAAAGTAGAATAGAGGTTTCCAGGG
ACTGGGAGTTACTTGATATAGAGTTTCAATTTTGCAAGATAAAAGAGTTC
TGGATATTGGTTGCACAGCAATATGAATATACTTAACACTACTGAACTGC
ACACTTAAAGATGGTTAAGATGGTAAATTTTGTTAGGTGTTTCTTACCAC
AATTTAAAAAAAAATTTTAATTAAAGGAATTAATAAATTTACAAAATACT
ATTCATCATTGTGTTTCCAGTTTAATATTCAACACAGCAGTATTTCAGGT
ATAGTAATTAACTTACTTTCATTTGAAAAGATGTCTATAGCTTAATAAAT
ATCAAACTCTTATTCATACTTTTGTTGATAATCTAGGAGAAACCAAGCAC
CCAAATGGAAATGGGGTTCTCACTACTTCACCTGCCCACCTTCAAATAGA
AGCCGGATTTCACCTACCTATAG

>Sequence 1407

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**AGCN** 

>Sequence 1408

GGTACCCTTTATAGGAACCCTCAAATTAAAAAAAAAATGTCTTTTAATGGA TGAGAGGGAACCACTATAACATGAGTCCAAGCCCAGAAGACTTCTGTCTA TACAATATTTTTTTTTAATTTTGGAGATAAAAGCTTTAAGAAACTTTTTG AGTTAATTATACTCATAAAATGAGTTTCTTTAATAAATTAAATTTTATTG TGTAAAATGTATTATTACATAAAATGTGTTTTTGAATCAATGCAGTTTGG GGATGAATATAATTAAAATATGTTTAATAACTTAGAATTCAACTAATAAA AATTTAGCCACACTTACAAGGGGGAGGAAGTCCCTAGTTTAAAATGTATA ACTGAGTGGTAGATCAGT

>Sequence 1409

>Sequence 1411

>Sequence 1412

>Sequence 1413

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#### Table 2

>Sequence 1414

**GGTACGCGGGTCAATTA** 

>Sequence 1415

CCCTTCGAGCGGCCGCCCGGGCAGGCACAACCTTTCAGGATGCAGTTCTT
TCATGACCATAGTGTTTTTTTTCCTATTACTCTTTCACTTACTCACAGGA
TTCAACCCATCTGACTCATCTGTTCCTCCCCAGACTCTTCTTGATCTT
TATTTTTTTAATTTACCAGAGAAGAGCAAGCACGTGAGCAGTGAATAACT
TGCAAGGATGCAGACTTTTTTATTTTGCGATGCTACTTTTATAAAAACAA
ACCGTAACATAAATAACTCTTTAATGAAAACTCAGAAAAATATTAAATCT
ATTCTTAAAAGGGTTTAGAAAGAAAGAAAGACAGCTGTTAGGTTATTTG
ATTTTCAAGTTTATCAAATAAAATTCAAATAGAATTGGCAAATCTTTAAT
GGCATATGAATACTTCTATCACTTAGTAATTAATTTGAACAGAGATGTTA
TTAGGGTCCTTAGTATCACTCATCCTTTCCCTCCATCTTTATACAAAAA
AGAACATACAGAAATTTAACAAAGATATATGACTTACTCATATGTTTTAT
AAAAAGTATCACCTAGCAGGTGTCTTCCATTTAATCTAACANAGGTTTAT
GTAGCANAAGATACATGAATGAAGCCCTAATCACAGAATCTN
>Sequence 1416

>Sequence 1417

>Sequence 1418
GGTACTAATTTACACCAACAGGTGAAGTTTCCTAGAAGAGTCGTCAACTG
GTAACATGGGATTAGCTGCTAGAGGGACTGAGGACTCTAAAGAGAACATA
AGCAGCAAATTGCAAGAGCATCTGTAACTGCTGGGCTAAGGCAGGGACC
CAGGAGGGAGCAAATCCAGGAATGGGGTGCTCCCCAGGGCCGAGATCCA
GACCTCATTAAACAGGATTTGGTCACGGCCCACTGGATAGTGGGGAAGCC
TGTGGGGTTGTCCATGTGGTGGCTGCAAGCAGGGGCCTGCTTTCTGGGG
GTGCTGGTGGAAATCACTAGACAGTTACCCTGTGGGTGCCTGCAACACTT

TCTGGGCGTTATAAGGAAGATGGCCTCTAGTGTGCTAGTGGAACTCTCTG

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>Sequence 1419

GGTACACATAAGTTCATTCTTGGCTTTTTAAATTTTATGGAAAGACTAAA
TACATTTGTGTCTATTAATCAAAATATGAATTTAGAAGGAAATAATTTTG
TGTAAAAAATTGTATGTGGTAAAAATTTTACCTAATTTAAAATTGTTGTTC
CATAATTTTTTTAAAAAAGAAAAATTACAGAAATAAGACTTGGGGGGTGGG
GGTTGAAAAGTGGTGAAAGAACTAAACAAGTAGAAGAGGATTTCTAAAGC
ACTGGTCTCATGAAAAAAAGTTTCATGTGTGACTGGGTCCACTGAGATTGA
AAAGAAATTGTTTATACGATATTCTAAAAATTAAATGTTGCTGTCAGGGA
TGACATGATACAGGACCAGAGTCTGTGTAAACAACAAAGTTTTCTTAAAG
TATTGATACACGCTTTTAAAAAATTGCAAGAGGTTTTAAGTTTAATTCAAA
AATCTGTTTAACAGCCATTTTGT

>Sequence 1420

>Sequence 1421

>Sequence 1422

>Sequence 1423

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 ${\tt GGGGTTCTCTACATGCGGTATGGTTTGTCCTTGGCCCGAACACCCTAGGC}\\ {\tt GAT}$ 

>Sequence 1424

>Sequence 1425

>Sequence 1426

GGTACGCGCTTCAGGGCCCTGTTCAACTAAGCACTCTACTCTCAGTTTAC TGCTAAATCCACCTCGACCCTTAAGTTTCATAAGGGCTATCGTAGTTTTC TGGGGTAGAAAATGTAGCCCATTTCTTGCCACCTCATGGGCTACACCTTG ACCCCCGCGT

>Sequence 1427

>Sequence 1428

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>2.1

GGCGGCCGGAAGACCAACCGAGATGAAGGTGAAGATGCTGAGCCGGAATC
CGGACAATTATGTCCGCGAAACCAAGTTGGACTTACAGAGAGTTCCAAGA
AACTATGATCCTGCTTTACATCCTTTTGAGGTCCCACGAGAATATATAAG
AGCTTTAAATGCTACCAAACTGGAACGAGTATTTGCAAAACCATTCCTTG
CTTCGCTGGATGGTCACCGTGATGGAGTCAATTGCTTGGCAAAGCATCCA
GAGAAGCTGGCTACTGTCCTTTCTGGGGCGTGTGATGGAGAGGTTAGAAT
TTGGAATCTAACTCAGCGGAATTGTATCCGT

>3.1

GGAGAGGAGTCCTTTACTTAGAGTCAAGCTGAAGGAGCATCACAACCCCA
AAGACTGTTATGTTGTGAAATTTAGGCTGTGTTTTAATAATACTGATGAT
GATAGGATGAAATAGTAATTTATTGATTACTATATCTACTATATGTCCGT
AAGATAGCAGGGTCTTTATACTCGGAATCTCATTTGATCCTCATAGTTTT
TATTGGTTATTATTATCCTCATTTTACAGATACAGAAACTGAGGCTTCAG
AGAGGCTGTGTAATCAAGAGTTTGTATGCCTTTCATCTGAGGAGGTTGAG
GACAATCCCAAGTTAGAAAAATAAATGTCTTTAGCATTATTTTTCCTTAA
TGTTTAGAATATTAATAAGTTACTCAGATAATCTATTGGAATTTCTTCAT
GGCAGGGGAA

>4.1

GAGGTACTCAGTTTCCTTATCTATAACATGGGGATAATATTCGTAGCTAC
ATCGTTGTTATGAGGATCAATATCTGTAAAGCTCTTAGAACATGCATTTT
TCTTGTACT

>4.2

CTCAGAAATTAAGGCAAAAAGTCTTACTGACCATGTAAAGGAAATCCAAC AATTATAAACAGTCTCTGCCTTTAAGGAGCTTATAGTCTAGTTAAGAAAC CAGA

>5.1

>6.1

ACCTATGACCATCTTACATTATTTTTATGGTGGGGGGCCATTGGCTGTGG
AATGTGGGCAGTAACTTGCACAGTCAGTAACCGTGTGAGTAACGGGTTGT
TGGCATCCCCATTCTGGCACTCCTCCTCTAGGTCTCACCTACACGCTGGT
TTGTGGGCGGAGGGGCAGGTTGGTGCGTGGGGTGTCCGGGCACTGGCTGT
GCATGCCTTCTTCCTCTTCTGTCTCTTTGGCCACCTTTTCCAAAAAGTCAC
CAGTGACCAATTCTCCCAGTGTTTCTTTGGGACTCAATGCCTTGGGCTTG
GCATTGGGTAAAGCCGACTGGCCAGTTTCATTCTGACCAGCTCTATAGTA
GTCCGGTGTGGACCTCTGCCCTCCCTGCTCTGCGGAAGCTTCCTCAGCCT
TTGCTTCTCACTATTTACTATTTGCGGGGGCCTGGGGGTAC

>7.1

CGCGGTGGCGGCCAGGTACGGATCAATTCCGCTGAGTTAGATTCCAAATT CTAACCTCTCCATCACACGCCCCAGAAAGGACAGTAGCCAGCTTCTCTGG ATGCTTTGCCAAGCAATTGACTCCATCACGGTGACCATCCAGCGAAGCAA

GGAATGGTTTTGCAAATACTCGTTCCAGTTTGGTAGCATTTAAAGCTCTT ATATATTCTCGTGGGACCTCAAAAGGATGTAAAGCAGGATCATAGTTTCT TGGAACTCTCTGTAAGTCCAACTTGGTTTCGCGGACATAATTGTCCGGAT TCCGGCTCAGCATCTTCACCTTCATCTCGGTTGCTCTTC

>8.1

GCAACCGAGATGAAGGTGAAGATGCTGAGCCGGAATCCGGACAATTATGT CCGCGAAACCAAGTTGGACTTACAGAGAGTTCCAAGAAACTATGATCCTG CTTTACATCCTTTTGAGGTCCCACGAGAATATATAAGAGCTTTAAATGCT ACCAAACTGGAACGAGTATTTGCAAAACCATTCCTTGCTTCGCTGGATGG TCACCGTGATGGAGTCAATTGCTTGGCAAAGCATCCAGAGAAGCTGGCTA CTGTCCTTTCTGGGGCGTGTGATGGAGAGGTTAGAATTTGGAATCTAACT CAGCGGAATTGTATCCGT

>9.1

GGCGGCCGAGGTACCACATGCACTGATAGCTCTCTTTGTATGAACAGAGC TGTGGCAGGCCCTATGCCAGGGAGAAAGTAAGATTGGAAAAGAGCTTACC AAGGAGGTGGCATTTGCACTGTGCTTAAGGGGCAAGAAAAACGTCTTCCA ATCAGGAGCCACAAATGCTTGGCTGAAGTGCTACTGCTCTTTCATCCTGG AGCTGGAACAGACGTCACCAGTC

>10.1

>11.1

TITCTCTTTTGCATCACTCAGTCTCTTTCTCATCACTGAAACCTACAAATA
TITTAAAATCTTTCCATTAAAAAAAATTTTGCTGATCATCAACCTCTTCA
AATTATTAAGAGATACTTACTTTGTATGAAAAAATTTTGTCGAGATGTATA
ATCCATTTTTTTCTGGGAAGAGAGTCAGTT

-121

>14.1

CGCGGTGGCGGCCGAGGTACGGTATTCTCTTAAACAAGAGCAAGCCCATG
ATGATGCCATTTGGTCAGTTGCTTGGGGGACAAACAAGAAGAAAACTCT
GAGACAGTGGTCACAGGCTCCCTAGATGACCTGGTGAAGGTCTGGAAATG
GCGTGATGAGAGGCTGGACCTGCAGTGGAGTCTGGAGGACATCAGCTGG
GAGTGGTGTCTGTGGACATCAGCCACACCCTGCCCATTGCTGCATCCAGC
TCTCTTGATGCTCATATTCGTCTTTGGGACTTGGAAAATGGCAAACAGAT
AAAGTCCATAGATGCAGGACCTGTGGATGCCTGGACTTTTCTC
CTGATTCCCAGTATCTGGCCACAGGAACTCATGTCGGGAAAGTGAACATT
TTTGGGGTGGAAAGTGGGAAAAAGGAATATTCTTTGGGCACGGGAGGAAA
ATTCATTCTTAGTATTGCATATAGTCCTGATGGGAAAACACT

>15.1

GGTACTGCTCCCTGCACGATCCAGTCAGCCCCTGCCCGGCTGGTTATGTA

>16.1

>17.1

TGGCCGCCCGGGCAGGTGACTTTAGTCCTCACTCTGTGGGCAGGGG CATTACAGCATAGGGGTCCCTTTTGTCAGGGATTTATGATGGCATCACAC GCAGGATTCA

>18.1

>19.1

CCCCGGGAGAGGAATTGGGAAGAGCAAATTGCTGCTGAAAATTTCTACA TTGATCCAGACAAACAAGTTAGAGCAGGCTGAAAAAGAACCCTTGGTGTT TTTACTGTGTTCAACCAGATCAACTGGAAAAGTATAGATACCTTAATTAG CACTGTGCTCTGTGGGATTCTGGTCAGCCTGGCCCAGTGGTTTTTTTCCC CTGAACACGCCTGAAAGGGGAGCTCATAATGACTGCTGTGCAGGTGGCC GGGAGGGGGCTTCCTATTTGATTTAGTGGCTGATCAATGCCAGTTACCAA TTATTGGTAGCCCCATTTATACATGGTGGAAAAAAAGT

>20.1

GCCGAGGCACCACATTTTTTTAAGTTCTAAGGTAGCTTTCTCAAAGAAA ACCATTTCAGGGTGTCCATTAAAAGAGCATCTGCGAATTGTTTTTGCAGG GACTCCTAATCAGTCAGGAGAAGTAGAATGTAAGCAAAGTCACAAACCTC CCGTAAGAATTTGGTTCACCAGGACACAGCTCCTCTCTTATGAAGGGATG AGAAGCAGACCCCAAACCCAGTGCCACAGTCTCCCTGGAAACAGCAGCAG GCTTGGGGAATGCTTCCAAAAGGCTATGCCATTCAAGGTCTCAGGTTTTT TGGTT

>21.1

>22.1

>23.1

>24.1

CGCGGGCCGCCGAGGTACAAAAAAAGCACAGCCTGGCTCTGGGTTAGAG ACATGCTGACTGATGAGATCACCAAGGCAGCTGCAAAGGAGAGTCCGGTA GTGAAAGGCAATGCGCTGTTAGCTCTAAGCAGCCTTGCTGTCGTCGTATC TAGACATGAAGCCAGCCTCTCCTCAGACTCTGACGGGCTCCTGGAGGTTC AACCTAATTTCCTTTCAATGAAAGAGTGGGTTTCCATGGT

>25.1

GGCGGCCGCCGGGCAGGTACGCGGGAGGCACATTCTTTTCTACGTGAAG
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GTAGCTTGCCAATAGATGAATCCCACTCGTTTGACCCATGACGCTCCTTC
TTTTCATTTCTCCCTCTTTCCCCACAGCAGTGCATGTCCACCATACCACC
TGAGAGTCTGTGGAATCTAATTTTCTGTTATACTTCTTTCCTTACACTCA
TTTTCCTGTCTTTATTATTGATAGTCTAACTTTTTC

>26.1

GGCGGCCGAGGTACGGATACAATTCCGCTGAGTTAGATTCCAAATTCTAA CCTCTCCATCACACGCCCCAGAAAGGACAGTAGCCAGCTTCTCTGGATGC TTTGCCAAGCAATTGACTCCATCACGGTGACCATCCAGCGAAGCAAGGAA TGGTTTTGCAAATACTCGTTCCAGTTTGGTAGCATTTAAAGCTCTTATAT ATTCTCGTGGGACCTCAAAAGGATGTAAAGCAGGATCATAGTTTCTTGGA ACTCTCTGTAAGTCCAACTTGGTTTCGCGGACATAATTGTCCGGATTCCG GCTCAGCATCTTCACCTTCATCTCGGTTGCTCTTC

>27.1

CGGCGGCGGCCGAGGTACGGATACAATTCCGCTGAGTTAGATTCCAAATT CTAACCTCTCCATCACACGCCCCAGAAAGGACAGTAGCCAGCTTGTCTGG ATGCTTTGCCAAGCAATTGACTCCATCACGGTGACCATCCAGCGAAGCAA GGAATGGTTTTGCAAATACTCGTTCCAGTTTGGTAGCATTTAAAGCTCTT ATATATTCTCGTGGGACCTCAAAAGGATGTAAAGCAGGATCATAGTTTCT TGGAACTCTCTGTAAGTCCAACTTGGTTTCGCGGACATAATTGTCCGGAT TCCGGCTCAGCATCTTCACCTTTATCTCGGTTGCTCTTC

>28.1

GCGGCCGAGGTACTCAGTTTCCTTATCTATAACATGGGGATAATATTAGT AGCTACATCGTTGTTATGAGGATCAATATCTGTAAAGCTCTTAGAACATG CA

>28.2

CTCAGAAATTAAGGCAAAAAGTCTTACTGACCATGTAAAGGAAATCCAAC AATTATAAACAGTCTCTGCCTTTAAGGAGCTTATAGTCTAGTTAAGAAAC CAGA

>29.1

CGCGGTGGCGGCCGAGGTACTCAGTTTCCTTATCTATAACATGGGGATAA TATTAGTAGCTACATCGTTGTTATGAGGATCAATATCTGTAAAGCTCTTA GAACATGCATTTTTCTTCTACT

>29.2

CTCAGAAATTAAGGCAAAAAGTCTTACTGACCATGTAAAGGAAATCCAAC AATTATAAACAGTCTCTGCCTTTAAGGAGCT

>30.1

GCGGCCGAGGTACTCAGTTTCCTTATCTATAACATGGGGATAATATTAGT AGCTACATCGTTGTTATGAGGATCAATATCTGTAAAGCTCTTAGAACATG CA

>30.2

#### Table 3

CTCAGAAATTAAGGCAAAAAGTCTTACTGACCATGTAAAGGAAATCCAAC AATTATAAACAGTCTCTGCCTTTAAGGAGCTTAT

>31.1

CGCGGTGGCGGCCGAGGTACTCAGTTTCCTTATCTATAACATGGGGATAA TATTAGTAGCTACATCGTTGTTATGAGGATCAATATCTGTAAAGCTCTTA GAACATGCATTTTTCTTCTACT

>31.2

CTCAGAAATTAAGGCAAAAAGTCTTACTGACCATGTAAAGGAAATCCAAC AATTATAAACAGTCTCTGCCTTTAAGGAGCTTATAGTCTAGTTAAGA

>32.1

GGCGGCCGAGGTACGTATGCACTTGCTTGCCATCTAAGCAGGGACAATGG
CAGTTCATATCATGATGTTACTTTGATTCTCTGACCAAACTGGCCTGTGA
GCACCCTGGGCCTTTCTTCCTCTGTCAAAGGCCTTAAGACAGGTTTACCC
TGTAGCCAGGTCTGGAAGACAGAGCTGGGTTAAAGCTGGGTGGAGAAAGT
GAAAAAGGTCAGGTTTACATTCCTACGCGGAAAAGGATGTAACACGGGGC
CACATCCTATGCCCAATCCCAAGGCAGGGAGGCAGGGAAGTGGCTGCCAA
ACCTGTTGTAGGAGAGTAATAAATGACTTGAGAGTAAGCCTAAGCAAACT
CAAGTGGGAAGGGGAGTGGGCTGTAAAATAGTTTAAGAGACTCTCTCAGG
AAGTCAGCGTAATTGATGTGTAGAAAGGTAACAGTCAACAGTTCTCCTAA
CAAGACAGCTTCAAAGCAGCAGCTATAGTGGAGCCATTCCTGAGGCCTGCT
GCAGATCAAAGCATGATTATATTTTAGAGGCAAGTTCAGTTCTAGAGGA
GCT

>33.1

CGCGGTGCCGCCGAGGTACGTATGCACTTGCTTGCCATCTAAGCAGGA CAATGGCAGTTCATATCATGATGTTACTTTGATTCTCTGACCAAACTGGC CTGTGAGCACCCTGGGCCTTTCTTCCTCTGTCAAAGGCCTTAAGACAGGT TTACCCTGTAGCCAGGCTCTGGAAGACAGAGCTGGGTTAAAGCTGGGTGG GAGAAGTGAAAAAGGTCAGGTTTACATTCCTACGCGGAAAAAGGATGTAAC ACGGGGCCACATCCTATGCCCAATCCCAAGGCAGGGAGGCAGGGAAGTGG CTGCCAAACCTGTTGTAGGAGAGTAATAAATGACTTGAGAGTAAGCCTAA GCAAACTCAAGTGGGAAGGGGAGTGGGCTGTAAAATAGTTTAAGAGAC >34.1

>35.1

CGCGGTGGCGGCCAGGTACGGATCAATTCCGCTGAGTTAGATTCCAAATT CTAACCTCTCCATCACACGCCCCAGAAAGGACAGTAGCCAGCTTCTCTGG ATGCTTTGCCAAGCAATTGACTCCATCACGGTGACCATCCAGCGAAGCAA GGAATGGTTTTGCAAATACTCGTTCCAGTTTGGTAGCATTTAAAGCTCTT ATATATTCTCGTGGGACCTCAAAAGGATGTAAAGCAGGATCATAGTTTCT TGGAACTCTCTGTAAGTCCAACTTGGTTTCGCGGACATAATTGTCCGGAT TCCGGCTCAGCATCTTCACCTTCATCTCGGTTGCTCTTC

>36.1

GGTÄCATTTGTGTTTTATTGTGAÄGGGTCCTCAACTGTGTGGCTGÄTTCÄ
GGCTGTCCCCACTGCAATGTATGGAGAGAGAGAAAGGGATGAAAGTGAA

# Table 3

GGCAGGGGGGGGATGTTTGTTTCACGGGGTGAACTTCTGCCTGAGCAAG TTGATGTTGGCTTCCGAGGTATTTGGACACTTTCTTTCAATACATTTTTA TTTAGCACTTATTCTGTGTCTGCCCTGGGA

>37.1

>38.1

CCGAGGTACTTAAGTTTTTCTTCAGTTACAGCTACCATGTGAAAATAATT
CTCTGCTTATCAAGTTTACAACTTTAGAATTTCCTGTTTTAAAGTTTTCT
CATTTACTTATCACACAGTCATCTTCTTTTTGCCAAACGCTATAGTAGCA
CATTAAAAGGAGACTGATGTGAAATCAACTCTGTGCAAAAAGTATTGGGT
GCTTTGGTAGAAGTCTATACAGAAGACACTGGAGACACAAAAATGAATTT
TGTCCAGGTGAGTTGA

>39.1

GGTGGCGCCCGGGCTGGTACGCGGGAAAGCAAAACGACAAGCACGC CCTGAGCAGAGCCCCGGGAATTCAACCTTTAAGTGGATAACTTGGCTTCT GGTTTGCCAAGGAACCAGGGCATCAAACAGATGAAACAGCCTATTGTCCA TTTCAACAGGATTTTTCAGGAGTGGGGATGATCTTTCAAATTATCCACAA CTTAATTATTTAATATTTTGATAGTCAATTACCTAAGACACGGCATCGTC ACTGACCAATCAGAAGAGATGCCAGTAGTTGGGC

>40.1

CTCCCGCGGTGGCGGCCGAGGTACAGTTTAGAAAACTGTGGGGCTGAGT CCTCGGGGCCGTGGGCCAGCGTGGCTGATCACCATCATAACGGGCCTA TGGGGATACATTCTCTTAGACATTTTGAAGTAATTAATGCTCTCGTTAGT GATTAAGTCTGTGAAGTAGTCCTTTGCATAATCAAATCCATGCTTTTCTT TGATGCCATTGCGACAAACAGTGTAATTATAGAAGCGAGAATTCTTGATT AATCCAAGCCATTCTCGCCACCCAGGGGGGATGTAGCTGCCATTATATTC ATTGAGGTATTTTCCAAAAAAAGGCTGTTCTGTAGCCAGTGTTGTTAAGAT ATACAGCAAAAGTCCGAGGCTCATGCATGCCTGCCACGAGGGGGAAGAG CAGTTCTCGTTGTTGGTGTAGACATTGTGATTGTGCACATACTTCCCGGT GAGCATGGAGGACCGTGACGGGCACACATGGGTTGTAGTCACAAAGGCA

>41.1

>42.1

TGGAGCTCCACCGCGGTGGCTGGTCGGAAGAGCAACCGAGATGAAGGTGA
AGATGCTGAGCCGGAATCCGGACAATTATGTCCGCGAAACCAAGTTGGAC
TTACAGAGAGTTCCAAGAAACTATGATCCTGCTTTACATCCTTTTGAGGT
CCCACGAGAATATATAAGAGCTTTAAATGCTACCAAACTGGAACGAGTAT
TTGCAAAACCATTCCTTGCTTCGCTGGATGGTCACCGTGATGGAGTCAAT
TGCTTGGCAAAGCATCCAGAGAAGCTGGCTACTGTCCTTTCTGGGGCGTG
TGATGGAGAGGTTAGAATTTGGAATCTAACTCAGCGGAATTGTATCCGT
>43.1

ATTGGAGCTCCCCGCGGTGGCGGCCCGGAGAGCAACCGAGATGAAGGTGAAGATGCTGAGCCGGAATCCGGACAATTATGTCCGCGAAACCAAGTTGGAC

#### Table 3

TTACAGAGAGTTCCAAGAAACTATGATCCTGCTTTACATCCTTTTGAGGT CCCACGAGAATATATAAGAGCTTTAAATGCTACCAAACTGGAACGAGTAT TTGCAAAACCATTCCTTGCTTCGCTGGATGGTCACCGTGATGGAGTCAAT TGCTTGGCAAAGCATCCAGAGAAGCTGGCTACTGTCCTTTCTGGGGCGTG TGATGGAGAGGTTAGAATTTGGAATCTAACTCAGCGGAATTGTATCCGT

AGGTTTTTACCTGATGATTGTGTAGGTTTCTCCTAGCTCCAAAGTATCCG GCTCCTACGACTCTAAATATAACCTTCAAGGAAAGTGGAGCTGGTTTACT CTTTTCTGA

>46.1

CTAACCTCACATTTAATTGCGTTTGCGCTCACTGCCCCGCTTTTCCAGTCGGGGAAACCTTGTTCGTGCCAGC

>47.2

>48.1

GTGGCGCCCCGGCCAGGTACAAGGACATGCTGGATGCCAAGCAGTTC CCCCCTACCGTCTCACTGCCCCTCAAGACTTCAAGGCCACTCTCCCCATA AACATCAGACTACAGATTTAGGTGGAAGAGCAGCCATGTTTGAAGGGCAC ATGTGATGAGTGGGGGGCAGCAAGATGCCATTTCTGCATCTCCCAGAAGG GATGAGTCTTTGTCCCGATGCAAGCCCCCTATTCGTTGGGCTCCCAGCAG TGCTTACCTTCTACAGCGTTCACTCATTTTGTTCTTTCCCCCCCAACTTTT

>49.1

GCGCCGAGGTACAACTAATGGAGCTCAGAAGCTGTCAAGGATATAAGCA GTGCAACCCAAGACCTAAGAATCTTGATGTTGGAAATAAAGATGGAGGAA GCTATGACCTACACAGAGGACAGTTATGGGATGGATGGAAGGTTAATCA GCCCCGTCTCACTGCAGACATCAACTGGCAAGGCCTAGAGGAGCTACACA GTGTGAATGAAAACATCTATGAGTACCTGCCCGGGC

>50.1

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>51.1

>52.1

>53.1

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>54.1

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CTTTAAATGCTACCAAACTGGAACGAGTATTTGCAAAACCATTCCTTGCT
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>58.1

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>59.2

>59.3

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>60.1

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>61.1

>62.1

>63.1

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>63.2

>65.1

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T >67.1

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**ACCTTGTGAGAAGAGGAAGAAGGTGATAAGAACTAAGATCAGAGCATAGT AACTCTATGTCAGTGTCTGTCCCAGGTCCTAGAACTGGAATAGACCAACC** AAGCCCAACCCTTCTTAAAAGTAAGACTAGGTGCTTCCTGATTATATATT CAACTGCCTGGAAGCATGCAAGTAAAATTTCCTTGATGGCATTTCTAAAG TTCAAACATATTCTTCCTAAAAATGCATTTACAAAAAAATATTAAGATTGT GTTTTTTGGTTTGGACTTTAAAAAAAATTGTTTTCAAAACCATAATTGG **GGCCTACCCCAAAATGGAT** 

>75.1 TGGCGCCGAGGTGCGCGGGAGGCGTTGTGGGAGGAGGTGCGGGGAGAG AGGAAGGGCCTGTGCACTGAGCAGGCATCAAACATTAGTGGATGGCCTT GCGTCTCAATCTGCAGTAAAGAGGAAACTAATCTGAAAGGGAACGATAGG **ACTGTGTGTCTTTTTATTTTTTAAAATACGGAGTGTGCAATTTTACTGAA** TCTTGAATCATGCCCAAAAGAATGAGCTGTCGGTGCTGCAGTCGTGACCC AGGCTGA -

>76.1 GGTCTTGGCTGCCTGTGGGCTTCCCCAGGTGGCCTGGAGGTGGGCAAAGG GAAGTAACAGACACACGATGTTGTCAAGGATGGTTTTGGGACTAGAGGCT

# Table 3

TATTGGGGGGAGAGATCCCTGCAGAACCCACCAGCAGACGTGGTTTGC CTGAGGCTGTAACTGAGAGAAAGATTCTGGGGCTGTCTTATGAAAATATA GACATTCTCACATAAGCCCAGTTCATCACCATTTCCTCCTTTACCTTTTA GTGCAGTTTTCTTTTTCACATTAGGCTGGTTGGTTCAAACTTTTGGG >77.1

TCCCTTTAAGTGAGGGGTTAATTGCGCCGCTTGGGCCGTAATCATGGTCA

>79.1

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>79.2

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>80.1

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>81.1

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AGGGACCTACTTTGCAGGAACCTAGCATAACTTTGTGTGACGAGACTGCA
CAAGACAAAGCTCAGGCAAGTGGCTCAGTAGTTGGCCAGCCCAGCAGGGT
CCTCTGTATGAGTGTGCACCCAGCTGAAGAGAAAATGGAGAGCAGCAA
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CACCCTACAGGCAACCAGCACTTTAAAAACCACTCCAGGCAAAGTAATGG
AAGGAAAAAAG

>82.1

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>83.1

>85.1

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TTAGCTGAAAGCATCTGAAACGTGCTTATTTTTAATGGGCCCTCAAAGGA
AAGGGATGAGGCCAGCCATAAAGAAAGGCTTGGCCAAATATAGTTCTTGT
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>86.1

>87.1

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>88.1

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>88.2

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>89.1

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TTAATAGTATAACAGCAGTGAATCAGAGTTCTTTCATCTGACTTTGCTGA
CATTTCCAGCAGCTGTATATTTAATTCACAGTTAGGGGCTGAACAAACTA
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>91.1

>94.1

#### Table 3

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>97.1

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>98.1

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CCACTTTTAAACAATATTTGTCGGCTCTTTTCTTCTGCTTGTCTGTAAAT
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CCTTTCCTTGGGAGAGTTCATAATTCACCTACTCCATCTAGATATTTGTG
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ACAGA

>99.1

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>102.1

>103.1

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>105.1

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AATAATCTTGTGCAAAACCTGAGCTGATTTTCTCATCTATAAAATGGAAA
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AAAAATGTTTCATG

>106.1

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CATTGAGGGGCCGTTCATTGTCTCCAAAGTGAATGTGGGGTGGTTTGATCT
GCATGTGTCATTTGTATCCACACAAGTTAATTATTCTGCTTTTGTTGTAG
TACCTTGGTTGTGAAGCAGAAGCTACCAGGCGTCTATGTGCAGCCATCTT
ATCGCTCTGCATTAAGTAAGATGAGGATTCACTCTTTAATTTATGGGCACA
ATTTAGTTTCTCCACACAAATTTAGGCCTTAACTCTTTTATTTTTTCCT
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>107.1

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# Table 3

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>110.1

>111.1

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>112.1

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GCAGCAGCTCATCGGCTTCCTGCAAGACCCAGTCAGGCAAGGTCTCCGCGC
ACTTGCACGCCGGTGATGCCGCGCACCTGGTCGTTGAGGCTTTCCAGATG
CTGGACGTTGACTGTGGTGAATACGTTGATGCCGCAGAGAGCAATTCCT
GAATGTCTTGCCAGCGCTTTTCGTGGCGGCTGCCGGGGGCGTTGCTGTGG
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>113.1

>114.1

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>115.1

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>116.1

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>117.1

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AAATTTCTATACACTTAGGAGGGCTTCTAGGAAACAGGAAACGACA
>118.1

>119.1

>120.1

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>121.1

>122.1

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TTGCAGAATGGCTGTGCTCCTGAAATATTTCCTGTGAAGAAAATTGTTAC
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>123.1

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#### Table 3

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>123.2

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>123.3

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>124.1

CTCCACCGCGGTGGCGGCCGAGAAATGTCGCCAAACTGCCGTCTTCCCTC CTCGGCCGCTGCGACAAACACCCCACAAAATGGCGGCAGCGCCGTCGCCC TAGAATCCCCCGAGTCGCCTCTCCCCGCGT

>125.1

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CAGATCACGTAGAGCTCTCTA

>126.1

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ACAAAATAGCACTGGAATTATACTAGTGATCATAGCACATAGTCCAAGAA
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>127.2

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>128.1

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>131.1

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>132.1

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>134.1

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>136.1

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>137.1

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>138.1

# Table 3

>139.1

>140.1

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>141.1

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GGT

>144.1

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>145.1

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>146.1

>147.1

>148.1

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GACAACTGAACTGTTCGTTGCTTCCAGGGCCTGCTGATTCTTGGAAATGT GATTATTGGTTGATGCGGCATTGCCCTGACTGCCGAGTGCA >149.1

TTGAGCTCCCGCGGTGGCGGCCGAGGTACCTTCCCCTGAGGAGCCCCCT TCAGAGGGGTGAAGAGCAGTATCTTCAGAGGCCATCCAAGTTTTAGCATA ACAAGGAGGGAAAGAGAATGCAGAGAAGAGGCTGGTGATAGACAAGTTTC ATGTTCACAACTTGAATTGCAGAGGGTCAAGAGTTTAAAGAGTTTGGGATG GAAAGAAATCAAGAATTGGG

>150.1

GGTGGCGGCCGCTGTGAAACAATGCTCATAGCTCTTGAAACGACAGCGAT GTTTCCGTAACGGCATCTTAGCACGAAAAAGCTCCACGGTCTCATTCCAC AGCCTGGTAGCTCGGT

>151.1

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>152.1

>153.1

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TGCCTCCATCACGAAAGCACATATCATCTGTCCCTTTGGATTTTACTTCC
AGGACGCGTGTCGTCCCCAGCGTGTGTTGCCTTATGGTGCCGGCAGAGCC
TCAGCTATCTGCCTGGGAAGTCGGATGTCCTTGGAGAGAATTTGGAATGC
AGATAATTTTTCTTATTTCTTGAGAGCTTACTTTAATCAGCATGACACTA
CCTAAACACTGAAGATGGCCTTATATTAGTAAGATTTGCACAAAATTAAG
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>154.1

TCCACCGCGGTGCCTCCGCCCCCCCCTTTTCTGCGGCTTTCAGCGCGC GTTTCAGGTCGTCAATGAGGTCGTCGGCATCTTCGAGACCGATGGACAGG CGGATCGTGCCCTGGCTGATGCCTGCCCCGCCAGCGCTTCGTCGCTCAT GCGGAAATGCGTGGTGCTGGCCGGGTGGATCACCAGGCTGCGGCAATCGC CCACGTTGGCCAGGTGGCTGAAGACCTTGAGGGTTTCAATGAACTTCTTG CCCTGCTCGCGGTTGCCCTTGAGGTCAAAGCT

>155.1

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CTTGAAAAGACTTCAGTCTCCGCTCCCCTGTTGATCTCATGGAGTGGGGA
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CTCTTTGTTGATCTCATGGAGTGGGGAATTGAACCAGAACTGGA
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ACC
>156.1

130.1

#### Table 3

>157.1

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>158.1

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GTATAACATGCTCGTGGAGACGGGGGAGCTGGAGAATACTTACATCATTT
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GTGGACGGCAAGTCTGTCCTCAAACTTCTGGACCCAGAAAAGCCAGGTAA
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>160.1

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>161.1
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TGAGAAAATCCTGACTCTTGCAAGTATCTATATACCAAGAAGTTGACCTC
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ACAGGATATAACCCATTGGCAGTGCATTGATGTGGGGATGTGCAACTGAA
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>162.1
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ATCCAGGATCGTGGGGGCCAAGTCAATGTTGAGAACGATCTGTGGGACTA
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TCAAAGTCATATGGCATGGATTTCCCCTTGACCAGTCCAAACTGCCCAAT
ATGGTAACCATGGTCGGCGGTGTAAATGATGT

>163.1 TGTACATTGTCTTAAAATCTGTGGCTTGCCTGTTCAATTCATTAGTGGTG TTTTGTTAAGCAGTTTTTAATTTTGATGAAGTGTAACTTATTCATTTTTT ATTATGGTTATTGCTTTATGTTTCAGGTCCCAAATTTTGCCTTCTCACAA ATCACAAACATTATCCTATGTTTTCCTTCAAAAATTATATG TACTAAAGAAATTTGAGGGATTTGCTATAATGTTAGGGATTTTTCTAGAT >164.1 TATTTAATTTCTTAGTGTCTCAATTTCCTCCTCTATAAAACAGAGATAAT AGTATTTAGCCCAGAGGGTTGTGGTGAAGTGT >165.1 TAGTAATCAACCTGTTAATCCAAGGTCTTTAGAAAAACTTGAAATTATTC CTGCAAGCCAATTTTGTCCACGTGTTGAGATCATTGCTACAATGAAAAAG AAGGGTGAGAAGAGATGTCTGAATCCAGAATCGAAGGCCGTCAAGAATTT ACTGAAAGCAGTTAGCAAGGAAAGGTCTAAAAGATCTCCTTAAAACCAGA GGGGAGCAAAATCGATGCAGTGCTTCCAAGGATGGACCACACAGAGGCTG CCTCTCCCATCACTTCCCTACATGGAGTATATGTCAAGCCATAATTGTTC TTAGTTTGCAGTTACCCCTAAAGGTGACCAATGAT >166.1 TGATGAGCTCTCTAATCAGCAGGACCAAGGTGTGAAGTGGGAATGAACAT GGATCCATCCCATTGGATGGAGAAGAAGGTGGACAGCCTGTTCGTCTCT CATGTCAGCCTAGGGCTGGGAACAGTTTGTGAGGACTTATCTGTTGTACC T >167.1 AGCGCAAGTAGGTCTACAAGACGCTACTTCCCCTATCATAGAAGAGCTTA TCACCTTTCATGATCACGCCCT >167.2 CCCCTACCGCCAATCCCTTTTTACAATAAAACAGGACCGAAGGGTCCAAA C >167.3 ACCTTGAAACCCCTAACCGAAGTTACCCTTCGGGCCCGCTTCTTAAGAAA CTAAGG >168.1 CCGCACGCTGGCATTGCATCTTCAGGAGACGCTCGTAGCCCTCGCGCTTT TCCTAGGACAGTTCGCGGAAGAAGTGGCTCACGCCTTCCAGAGCCACATC ATCGCGGTCGAAATAGAAGCCCAGAGAGAGGTAGGTGTAGGAGGCCTGCA GGTACCTCGGCCGCTCTAGAAC >169.1 GGCCGCCCGGGCAGGTACTTCCACTATTATTGAATGTATTCTGTATTATA ATTGTATATTTGATTGCCTATCTCCCCTCAACTGCATTATACATTTTCAT GGGTGAGCCAGTGTCTTTTCACTCTATTTCAGTGCCCTGCACATTTTCT **GGCACATAGTAAGCAT** AAAATACTAAAATCCGAAATGCTCATAAAATTCAAAGCTTTTTTGAGGAC CTGACCTCGTGCCTCAAAGGAAATGCTCATT TGGCGGCCGAGGTACTTAGCTGTGTTTTTATTCAAAGTCTACATTTTATG TAGTGGTTAATGTTTGCTGTTCATTAGGATGGTTTCACAGTTACCATACA **AATGTAGAAGCAACAGGTCCAAAAAGTAGGGCATGATTTTCTCCATGTAA** TCCAGGGAGAAAACAAGCCATGACCATTGTTGGTTGGGAGACTGAAGGTG ATTGAAGGTTCACCATCATCCTCACCAACTTTTGGGCCATAATTCACCCA ACCCTTTGGTGGAGCCTGAAAAAAATCTGGGCAGAATGTAGGACTTCTTT ATTITGTTTAAAGGGGTAACACAGAGTGCCCTTATGAAGGAGTTGGAGAT AGGAACATTTCATTTGACCCAACATCCTTTAGGAGCATAAATGTTGACAC TAAGTTATCCCTTTTGTGCTAAAATGGACAGTATTGGCAAAATGATACCA

#### Table 3

CAACTTCTTATTCTCTGGCTCTATATTGCTTTGGAAACACTTAAACATCA >171.1

>172.1

>173.1

>174.1

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>175.1

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AGCGTGTGTGGGGAAAGTCTTCCTCCGTCATTCATTCCTGGACAGGGACAT
GAGAGCTCATGCTGGACACAAACGATCTGAGTGTGGTGGGGAATGGAGAG
AGACGCCCCGGAAACAGAAACAACATGGGAAAGCCTTCATTTCCCCCAGT
AGTGGTGCACGGCGCACAGTAACACCCAACTCGAAAGAGACCTTATGAATG
CAA

>176.1

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TAAGGCAGGAAGATGGCGGCCGCACAGAAGACGAAAAAGTCGCTGGAGTC
GATCAACTCTAGGCTCCAACTCGTTATGAAAAGTGGGAAGTG
>177.1

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AACCACTTTTCCTCTTTCCTCTGAAATATCAGAAGTTAAAAATCTACTCT
GAGTTATATGTGCATCAATTTTAGACATATTTCCTGATTTTATTATGAAAA
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AGACCAGCACTGCTTGACCCATGTGTATACACATGTGTGCTTTGT
>179.1

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CCTTGGGCTTCATGGGGTTGGCATTGAGGATCCCTACGACAGTCCCCTGC
TCCGTCTTCCAGAGCGCTTTGTGAACTTCTCCAAATAAGAACAAGGACAC
ACATTGTGTCAGGTCACGAAGATCATTCAGTTTCCATATGCTGAAGGTTT
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CTGAGACAGTCTGATCAGTTT

>180.1
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TGAATGATCTTCGTGACCTGACACAATGTGTCCTTGTTCTTATTTGGA
GAAGTTCACAAAGCGCTCTGGAAGACGGAGCAGGGGGACTGTCGTAGGGAT
CCTCAATGCCAACCCCATGAAGCCCAAGGATGGTTCAGAGGAGGTGTGTT
TATCTATCGATCATCCTCAGAAGGTCTTAATTATGGGTGAAGCTCTTGAC
CTGGGAACCTGTAAAGCCAAGAAGAAGAATGGAGAGCCGTGCACGCAGAC
TGTGAATTTGCGTGACTGTGAGT

>181.1

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GAGCGCTTTGTGAACTTCTCCAAATAAGAACAAGGACACACATTGTGTCA
GGTCACGAAGATCATTCAGTTTCCATATGCTGAAGGTTTTTCCACTATTC
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TGATCAGTTT

>182.1

## Table 3

TAAATGAAGAAAAGCACAAAGAACTAATAGAGAAAAAGGAGAT >184.1

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AATATTTCCCGTAAATACTGCCAAATCGCTACACAGACTTAGTGGCCATC
CAGAATAAAAATGAAATTGATTACCTCAATAAGGTCCTACCCTACTACAG
CTCCTACTACTGGATTGGGATCCGAAAGAACAATAAGACATGGACATGGG
TGGGAACCAAAAAGGCTCTCACCAACGAGGCTGAGAACTGGGCTGATAAT
GAACCTAACAACAAAAGGAACAACGAGGACTGCGTGGAGATATACATCAA
GAGTCCGTCAGCCCCTGGCAAGTGGAATGATGAGCACTGCTTGAAGAAAA
AGCACGCATTGTGTTACAC

>188.1

ACTITITITITITITITITITITITITITITAACTACAGGTGTCAGATGCATCACA
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CATGCTGCCTACAGCAACAGCATAATACTGCAAACAGCCATGATGTCA
>188.2

>188.3

AGCGGATGGGAAGTGATACTAGGTATGTAAAGGATGGTCAGTTACCTCTA AATGTAAGTTAGACCAGGACAGCCAG

>189.1

# Table 3

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>191.1

>193.1

TTTTCTCTTCCTTCGCTAACGCCTCCCGGCTCTCGTCAGCCTCCCGCCGG

>194.1

CGGCCGCAGCGCAGCTACAACAACCGCGTCGCTCCAATTTCCAAGAGCCAGCTTTGAAGCCAAGTGCCCCGCGTACCT

>196.1

>197.1

GCAGGGCGCTATGCCGCCAAACGCTTCCGCAAAGCTCAGTGTCCCATTGT GGAGCGCCTCACTAACTCCATGATGATGCA

>198.1

## Table 3

>199.1

>200.1

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>201.1

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CTGATGAGCAACTTGGACAGCAACAGGGACAACGAAGGTGGACTTTCCAA GAAGTACCTGCCCGGGCGCCCGCTCTAGAACTAGT >202.1

>203.1

>204.1

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CCGGGTGGCGGCCGAAAACTGATCAGACTGTCTCAGATCAAGGAAAAGAT GGCCAGAGAGAAGCTGGAAGAAATAGATTGGGTGACATTTGGGGTTATAT TGAAGAAGGTTACGCCACAGAGTGTGAATAGTGGAAAAACCTTCAGCATA TGGAAACTGAATGATCTTCGTGACCTGACACAATGTGTCCTTGTTCTT ATTTGGAGAAGTTCACAAAGCGCTCTGGAAGACGGAGCAGGGGACTGTCG TAGGGATCCTCAATGCCAACCCCATGAAGCCCAAGGATGGTTCAGAGGAG GTGTGTTTATCTATCGATCATCCTCAGAAGGTCTTAATTATGGGTGAAGC TCTTGACCTGGGAACCTGTAAAGCCAAGAAGAAGAATGGAGAGCCGTGCA CGCAGACTGTGAATTTGCGTGACTGTGAGT

>206.1
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GGCTTCATGGGGTTGGCATTGAGGATCCCTACGACAGTCCCCTGCTCCGT
CTTCCAGAGCGCTTTGTGAACTTCTCCAAATAAGAACAAGGACACACATT
GTGTCAGGTCACGAAGATCATTCAGTTTCCATATGCTGAAGGTTTTTCCA
CTATTCACACTCTGTGGCGTAACCTTCTTCAATATAACCCCAAATGTCAC
CCAATCTATTTCTTCCAGCTTCTCTCTGGCCATCTTTTCCTTGATCTGAG
ACAGTCTGATCAGTTT

>208.1

>209.1

>210.1

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GAGCGCGGTGTGAACTTCTCCAAATAAGAACAAGGACACACATTGTGTCA
GGTCACGAAGATCATTCAGTTTCCATATGCTGAAGGTTTTTCCACTATTC
ACACTCTGTGGCGTAACCTTCTTCAATATAACCCCAAATGTCACCCAATC
TATTTCTTCCAGCTTCTCTCTGGCCATCTTTTTCTTGATCTGAGACAGTC
TGATCAGTTT

>211.1

CTCACCGCGGTGGCGGCCGAGGTACTCACAGTCACGCTCCTCTGAACCAT CCTTGGGCTTCATGGGGTTGGCATTGAGGATCCCTACGACAGTCCCCTGC TCCGTCTTCCAGAGCGCGGTGTGAACTTCTCCAAATAAGAACAAGGACAC ACATTGTGTCAGGTCACGAAGATCATTCAGTTTCCATATGCTGAAGGTTT TTCCACTATTCACACTCTGTGGCGTAACCTTCTTCAATATAACCCCAAAT GTCACCCAATCTATTTCTTCCAGCTTCTCTGGCCCCATCTTT

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>214.1

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>215.1

>216.1

>217.1

>218.1

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CTTTCATAATGGTGTGGCTGCTGGCCTGAAGATAGCTCCTGCCTCCAGA

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CAAGCTGGCGACTCTCAATATCCATGACTACTTGACCAAGGGCCATGAAA
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>219.1

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GCAGAATACACCAAAAACCAGGCCTGGAAATCTATGAAAGATACCTTAGG
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GT

>221.1 CCGGG

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CCCCAAATGCTCTTCAGGATTTAAATAACAATTTTTAAAAAGACACTTAA
CACCACAAAATGGAATTTGCTGGCATGACGCGAACAATACGGTTACTCCA
GATGCTGTATTCAAACTGTATGGGTCCGTTGAAAAAATAGATATAACCAT
TTTTCTCATAGACAGCATCTACTTTATCACCAATTCCTGGGAAGTCTTCT
TCTATTAGTCTCGGATAGTCTTTATCCATAATATGGCTAGTATCATCATA
TCTCCAGACCTGGTTTCCTGAGAACAGGAGAGTCTTTGCCTGTATCCTCAA
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GATATTTTTTTGGGATAACCTTCCAAAATGTCATAACCAT

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>223.1

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CAAGGCTCATCGATTTACCTGGAACTGAGTTGGCTCAGCTGATGGGGGAA
GTGGACCTTAAGTTGCCTGGCGGGGCTGGCCCAGCATCAGGATTCTTCCG
GTCTCTCATGTCTCTCAAGCGAAAGGAAAAAGGAGTGATATTTGGGTCCC
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CACAAAAACTTGCGAGTAGAGGGTTTTTTAGAGT

>224.1
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>225.1
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>227.1

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>229.1

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### Table 3

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**-288 1** 

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>316.1

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>318.1

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>319.1

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TTCACTTGAAGATCTTGCCCTGATTGAAGGCTTTGCCCACATGCTGGAAG
GCCCCCTCCCAGGAAAAGTACCAGACATCAGCTGCCTCTTCTTCATTTTC
AGCCAAAGAAAGGGCACGTTCAAATGAGGTCAGAGTCATATCATACTGCT
GGGCATAGAAGCAACACACGCCCCAGATTGTTAAAAAGCTGGCCGTTATAA
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ATCAGAATAGAAGTGGTTGCTTCCAATGCATGCG

>323.1

>325.1

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>328.1

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GAAGGTATTCTTCATTTTTAATTGCTTTTTGGGATTACTCCACATCTTTTG
TTTAATTTCTTGACTAATCAGATTTTTAATAGAGTGAAGTTAAATTGTGG
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>331.1

#### Table 3

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CCCGCGGTGGCGGCCGAGTTTGATTTCTTGCAGTCCTGAGCGATGGAGC CCGGGGGTGCCTGGTTATTGTCCGCTTTCTCTCTCAGATGCTTGGT TTTTCAAGAGAACCTTTTTCGATATTCATTGCTCCATCGATTGGATCCAG TCCTTGTTCAGAAAATTGTTTCAAGGCACTTAAGGCTGCCTGAAAGCCTT GAATCCTTGCTAAATATTCCAGTTGTTTTGAAGGTTGTACCTCGGCCGCT CTAGAACTAG

>335.1

>336.1

ACTCATGAAGGAGATGGCCCCTTTGGGAGCAACCAGAGAATCACTGAGAT CCCAATGGAAACAGGAGGTTCAGCCAGAGGAACCGACTTTTAAGGGATCA CAGAGCTCACACCAAAGACCAGGGGAACAGTCAGAAGCCTGGCTTGCTCC TCAGGCTCCCAGGAACCTGCCTCAAAACACAGGTCTCCACGACCAGGAGA CAGGTGCTGTGGTCTGGACAGCTGGGCCCCAGGGACCAGCCATGCGTGAC AACAGAGCTGTATCCCTCTGTCAGCAAGAATGGATGTGCCCAGGCCCTGC ACAAAGGGCCCTCTACAGGGGTGCCACCCAGAGGAAGGACAGTCACGTCT CGCTGGCAACAAGGTGTGCCCTGGGGCTATGAAGAGACCCAAGACGCTCCT GGCTA

>337.1

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>339.1

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>340.1

>341.1

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AAGTTGAAGT

>343.1

>344.1

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### Table 3

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>346.1

>347.1

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>348.1

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TCCCCAACCTTACCCTACACCCCTCACCTCCCAATCCAAGCCAGTCTCCT
TTCCCTGCTTTCTCAAACCATGTTTGGACCTGCTTGGAAGCTCCCTCTGC
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GTGGGGGGT

>349.1

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TCTGTCAGAATGCCAATACAAGCAGTTGAGTGTTTCGTTGCTGTGTTATA
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>350.1

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TCCTGCGTTGCTGAGAGTCTGGGTTTATTCATCACACCAGGTGGATCTTA
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>351.1

>352.1

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## Table 3

AAATAGAATGAGAACCATATTATGT

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CTTTTCCTTACTTTGGGCATTAACTGCTGTTGAGGTCTCACAGCCTGATG
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AGATTCTACATGAGGGAGAGCATTTCAAACCCATGACAGATGAGAGAAGT
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GCTCCTCATCTCTCTCTGTTCTGAGCTCTCTGATCCACCGCACTTGGGG
CAGGGGGTGCATTCTCTGTGCCTCTCCTGAGTCTACTTTCTGCATCATTG
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>354.1

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AAGAAAGGTGATAATGTAGACATCAAGGGAATGGGTACTCCAAAGATTCA
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>356.1

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CAGTAGAACATGGTACCACCATTCTTCCAAGTTCAAAAATTATCTTTGAT
TCATTTTGTTCCCCATTCCTCTAATATGTCACCAATTCTGCTGATACATT
CTTTGTAATCTCTCCATCTATTTTAATCTGTTATTCACCTGAGCTACACA
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>358.1

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>359.1

>360.1

>361.1

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>362.1

>363.1

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>364.1

>365.1

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GTTTAGCATGTATGCAAACTGATATGTAATCCGGGGTTCCAAAG
>366.1

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>366.2

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>367.1

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>369.1

>370.1

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>371.1

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### Table 3

>372.1

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>373.1

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CAGGTCCTTCAGGAGGTATCCAGAAGAAGCATTGTGATCATAGGAGCTG
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>375.1

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>376.1

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TTTCTGAAATAATGCTGATTCCTGAGATAAGAAAGTGGATTTGATCCCCA
GTCTCATTGCTTAGTAGAATAAATCCTGCACCAGCAACACACTTGTAAA
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>379.1

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>380.1

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>381.1

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>383.1

>384.1

>385.1

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#### Table 3

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>386.2

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>391.1

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>392.3

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>393.1

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>396.1

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>397.1

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>398.1

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C

>400.1

>401.1

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>401.2

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>402.1

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#### Table 3

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>403.1

>404.1

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>407.1

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AGGTTAACTTTTTTCAGGGTTT

>409.1

TTTTTTATTTTGCTTTTTTTCGCGGGAGTTAAATAAAATAAGCATGTCT
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TTTACCCCTTCTTGTTTTCTCTTGCTTTTCAGGTAATTAACTCTTCTCTT
TTTAGTTTGAACTATGCAGTGCAAGATTCCTCTGTAGTCTTTCCAAGTGG
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CCCTGGCTTCGGAAAGTGGTTGGCTCACCCCGCG
>410.1

GGGCAGGTACTGTGCAGTAGTAACCATAATTCTAAATGAGGATTATGGAT TTTTCTGGAAGATTCTTTTTTCCTGTGGAACATGATGAGAAATGTTTAGG AGAGGGGACATAGCCATTTTTGTATGAAGACCAATTC

CACACTCACACGCATGCACACATGCACGCACAACTTCACTCTATATTT ATTCT

>411.1

GCCGGCAGGTACTAGAGTTTTCAAGTATGTTCTAAGCACAGAAGTTTCTA
AATGGGGCCAAAATTCAGACTTGAGTATGTTCTTTG
~412.2

GTGAATTTTGGCACAAAGGAGTGACAAACTTATAGTTAAAAGCTGAATAA CTTCAGTGTGGTATAAAACGTGGTTTTTAGGCTATGTTTGTGATTGCTGA AAAGAATTCTAGTTTACCTCAAAATCCTTCTCTTTCCCCAAATTAAGTGC CTGGCCAGCTGTCATAAATTACATATTCCTTTTGGTTTTTTAA >413.1

>414.1

GGCGGCAGGTACGCGGGATCCAAGATGAAGTGCAGAGAAAATAAAGAATC CAAAGTCATAGTCATGAGGACAGAAT >415.1

AAAACCAAGACGAAGCCACTACAGCCCCGCGTACCTGCCCGGGCGGCCA
AAGGCCAACAAGGCAGTGGG
>416.1

TCACCGCGGTGGCGGCCGAGGTACGCGGGGCTGCGGAGGACCGTGGGCAG CCAGGGTCGGTGAAGGATCCCAAAATGGCTGGGCGAAAACTTGCTCTAAA AACCATTGACTGGGTAGCTTTTGCAGAGATCATACCCCAGAACCAAAAGG CCATTGCTAGTTCCCTGAAATCCTGGAATGAGACCCTCACCTCCAGGTTG

#### Table 3

>418.1

>419.1

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>419.2

>420.1

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>421.1

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>422.1

#### Table 3

>423.1

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>424.1

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CGGTATCCGGAAGCTACAGATTCAGTGTGTGGAGGACGACAAGGTGG
GGACAGACTTGCTGGAGGAGGAGATCACCAAGTTTGAGGAGCACGTGCAG
AGTGTCGATATCGCAGCTTTCAACAAGATCTGAAGCCTGAGTGTGGGT
>425.1

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AACCCTGTTGGCAAAGACAGCTGCACAGCTTCATTGCAGGTTTCAGGTTG
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TTTCATAAATGTATATGGGTTGTTACATCTTCTATAGGATAACATGAGTC
CGACATCTTCTGAATCAGCAAATTCAGAGGCAATACCATCTCAAGAAGCC
ACCATTGAGACCACAGCCATTAGCTCATCCATGGTCATCAAGAACTGCCA
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ATATC

>426.1

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TGGATGTAATCAATGTGGAAAATCATTCTGTGTGAAGTCAAAACTCATTG
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>427.1

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>429.1

>430.1

#### Table 3

>432.1

>433.1

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>433.2

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>434.1

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>436.1

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>438.1

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ACTTCTTGCATGCGAGGGACCATTGCGTGGCCCACAAACTCTTTAACAAC
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GCAGCTA

>442.1

>439.1

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>444.1

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#### Table 3

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>444.2

>445.1

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>446.1

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Α

>446.2

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>447.1

>447.2

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>447.3

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>448.2

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>451.1

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>451.2

>452.1

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>453.1

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#### Table 3

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>459.1

>460.1

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GCGT

>460.2

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>462.1

>463.1

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>464.1

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>465.1

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>468.1

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>470.1

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#### Table 3

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>473.1

>473.2

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>474.1

>475.1

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>477.1

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>479.1

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>481.1

>482.1

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>485.1

## Table 3

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>486.1

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>489.1

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>490.1

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>492.1

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>492.2

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>494.1

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**407** 1.

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CTCTGGATATACACGTAGGAAGCTTTTGGTATTTCCACTAGTGAAACTGC
TCAGTTGAAGGGTATGTGGATCTTCATCTTTAATAAATATTACCAACATG
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>500.1

GGGGGTGCCTAAATGAGTGAGCCTAACCTCACATTTAATTTGCCGTTTG CGCCTCAACTTGCGCCCGCTTTTCCAG

>501.1

TGTTAAAGCCTGGGGGTGCCTAATGAGTGGAGCTTAAACTTCACAATTAA
ATTGCCG

>503.1

>504.1

TGCCTAATGAGGTGAGCTAACTCACATTAATTTGCGTTGCTGCTCACTGC CCCGCTTTCCAGTCGGGAAAAC >506.1

ACTCGTCTTGGTGAGAGCGTGAGCTGCTGAGATTTGGGAGTCTGCGCTAGGCCCGCTTGGAGTTCTGAGCCGATGGAAGAGTTCACTCATGTTTGCACCC

### Table 3

>507.1

CGGCCGAGGTACACTCCCACGACCACGGCATGGTCTCTTTCATATGGCTC
AA

>510.1

AGGCGGGTGCGGGAGGCGGAAAAAAAAGAAATATACCCTGGCAGCGCTGC CGGCCGGAAAGCGGAGAGGGACGCTAAGATCAGCAAATTCGCCAGTTTGG ATCCTTGTCCTTTTCCGCCCTTTTCCCCCCATTAAATCCAGAACCCGTCA CATGATAATTA

>514.1

>515.1

>516.1

TTCCAGCATGTTGCATCTCTGCATTTATCCTATATCATTAAAAGAACATA AGTTATCATGGTGTTGGGTAAATTAGC

>517.1

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>518.1

WO 01/42467 PCT/US00/33312

## Table 3

>523.1

>526.1

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CATTCAGTTTCCATATGCTGAAGGTTTTTCCACTATTCACACTCTGTGGC
GTAACCTTCTTCAATATAACCCCAAATGTCACCCAATCTATTTCTTCCAG
CTTCTCTCTGGCCATCTTTTCCTTGATCTGAGACAGTCTGATCAGTTT
>529.1

CTCCCCGCGGTGGTCGGCCGAGGTACATTGTATACTGCAGTGTCGTCTAC

## Table 3

ATGGCATTGGACAGGACATAATGTAAAACATAAAAGTGCAATTGTTACAC TTACATATGATAGTGAATGGCAACGTGACCAATTTTTGGTCTCAAGTTAA AATACCAAAAACTATTACAGTGTCTACTGGATTTATGTCTATATGACAAA >530.1

CTTCCCTGATAATAAATCACTGGAGAACAAAAGCGAATAACAGCAGGTCT

>532.1

TAACACTCTTAGAAGACTGGTTTGTTCATTTGACATTGGGACGTGCACCA
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CTTAATGCAGTTTTATTAAGAGAGTCAAAATTCTCTCAGTTAACTGGATA
TACATAGTGGTATATATCTTAAAGCAGAAAACCCCAAAAAACAAAAACAA
GGAAAAAAGAAAATACATGTCAACAGTCAGTTAAATATTTTGACCTGACA
GTTTCTACAAATAGTGATTTTCACTACATATAAAGGAATCTGTTACATGT
GGTAAAACTTCCAGAAACCAAGTAGGAAGTGTGGAATAAAAACAATAAAT
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TCTGCAGATGAAAAAGCAGCTGAAAGGAGTCGTAAGGCTGGACCAATAAC CCTAAAACTGAAGCCTGATTACTGGAGTGACAAACTATTGAAAGAAGCAG AAGCGTTTGCTTATTATCGCCGGACACACACTGCCAATGAGCGGCGGCGG CGTGGTGAAATGAGGGATCTCTTTGAGAAATTAAAGATCACTATTTGGAT TACTTCATTCTTCCAAGGTTTCCAAAAGTCTCATTCTTACTCGAGCCTTC AGTGAAATTCAGGGACTAACAGATCAGGCAGACAAATTGATAGGACAGAA AAATCTCCTGACTCGAAAACGGAATATTCTGATACGGAAAGTATCGTCTC TTTCAGGTAAGACAGAAGAAGTGGTCCTGAAGAAGCTAGAGTATATTTAT GCAAAACAGCAAGCACT

>538.1

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>538.2

>538.3

ACAAAGACATGGATTTACTGTGCATATTAGCAGATCCATACTGGAAAATGCATGGAGGTTTCATATACACCACTTAC

>539.1

ACTITATTTGCTAAAAAATGCTAATGATATCCAAACCATCAGCTACTTG TAATCTTTTTGCTGGTGGAGGGTTTTGTCTCAATTTTGGTGGCTGCTGAC TGATCAGCGTGGTGGTTGCTGAAGGTTGGAGTGGTTGTGG >541.1

#### Table 3

>542.1

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GGTGGAGTGGGGCCTATTGACAGTCACCCTGAGGTCTTTAGAGGACCAGC
TATTGTATCACCTTGGATACTTGAAGTTTAATGCTCAGTTGGGTCGGGTG
GCATTTGACTTGGAGGCTGGCATGTTCACCAGAGCCTGGGGCCCTGTATC
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AT

>543.1

TGGCGGCCGAGGACACATACTTACTTACAAATTTAATACTGCTTCAAGG
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CCCTAAGCATGAAATGTTGTCAACAAATACCCAGTTCCATTTAGTTATCA
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GCCCGGGCGGCCGCTCGACCACTGACATAGACTGAAAGCAAGAAGAGTGC
TGTGTTTGTTGCTATATCCCCTCCAACACCTAAGGCAATGCATTTCACAT
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AT

>545.1

TGTTTCCTGTGTGAAATTTGTTATCCGCTTCACAAATTCCACACAACATT

>546.1

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>547.1

GGTACCCTTTGTAATATCCTTTATATAAACCAGTAAATGCTGTTTCCCTG AGTTCTGTGACCTGCTCTGGCAAATTAATCAAACCCAAGAAGGGGGTTGT

## Table 3

>549.1

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>549.2

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>550.1

CTGTGGAGAACCTACGCACTGCACGCCATGCCTGTTTCCTACTCAAGCCT CAAGACTTCTACCTTGATCTGCTTGCCTTCCTTGACCATCTACCTAGAAC TAACCGAGTCCCAGCTCCCAACCTGGCATGAGCTTGGACAGGGTGGACCG CCACCCTGCCTGAACCATGGAGACAGCC

>551.1

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CCTTTTGTAGATGAAACCATTGCGTAAGTAATATAAAGACTTTTCCCTGT
AGTTATCTTACAGACTGGAGAGAGTGCTAGTGAATGCTTTTGTCTTCAAT
GCCCATCTCTTGGAAATATTGAAGGTGGAGTAGCAACCGGGCATTATATT
ATCTCTTGGAAAAGGACCTCAGCAATGGAGAATATCCCCATCATCACAAC
TGTCATCACTCTGCCGCACGTGATTGTGGAGAATATCCCTCTCCATGTGA
ATGCAGAATGAGATTCATTTACAAAACGAA

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>554.1

T

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>557.1

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>557.2

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>559.1

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TTGCAGCTGGGAGCGGACGCGAAGCTGGGATTTTTTACTGTCTCC
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TCAACAATATGAATGACAAAATTAAAAAGGAAGAATTGAAGAGATCCCTA
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>560.1

>561.1

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### Table 3

>564.1

>565.1

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>568.1

>569.1

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GGAGGTGGTGGAGATGAGCCTTGTTTGCCAGATTTCCGTTCGTAGTTCAC GAGTCGTTGACCCACAAGGT

>571.1

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>572.1

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>576.1

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>577.1

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>578.1
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ACATGTCCATGTATTGCGAAGTCTGAGGAAACTCAAGCTCCTCCAGTCCT
TTTAAAATCTTTGCAATGTAGGGATAATTTTTCTGCAGAATCCTTGCCAA
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>579.1

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>581.1

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>582.1

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AGCTGCTGTCGGCCAACCCTATCAGCGGGGAGGCCACAAAGCATAAGAAT
TCTTTTGGGATTACACTGACATCAATAATTTTTATCACTATCTTCCATTA
CACTATTGTGCACATTAAGCCAATTTTCTGATCATCACA

CAGACAAGCTITCATTTTTTTTTCAAATCCGACATCTACTCCAACTACAT
GATACACTAAAGTGCTTGCTGTGTGGGCTTCCAGGGGAGATGAAATGGTA
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>584.1

## Table 3

>585.1

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>587.1

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TGGACAGGAAGACCAACGACTGGATCCTTCCCTCAGACTATGATCAT GCAGAGGCAGAAGCCAGGCACCTGGTCTATGAATCAGACCAAATCAAGGT TTTTTTGCTGTCCAAGGAGGAGATCGCTGACAAGTATGACTTATTTGTTG GCAGCCAGGCCGCAGATTTTGGGGAGGCCTTAGT >589.1

CCAGGGTCTCTGGTCTACCGATGTCAAAGCAAATCAGCACAGCATCCGAA TCAGGGTAAGAGAGGGGGGGGACATTGTCATAGTAAGGAGAATCCGAATT TTTCCACAGGCTCAACTCTATTCTTTGTGTGTCGATTTCAAAACTGGCCG TGTAATTCTCAAACACTGTAGGAACGTAATTCTCGGGGAAGCAGTCCTTG GCGAAGACATGGAGCAGCGCAGTTTTTCCACACTGACTGTCTCCCACCAC AACTATCTTGCAT

>591.1

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CACCTGTATTTCTTAACTTGCCAGAGCTGAGTCTCATGGCCACCCTTAGC
AGGAGTTGGGGAGGTATTTTTAACAAGGCACATTATCATCTCCCCCACCC
AAAGTGGAGCTATTGCTAATGAAAAAGATACAATGAGATGTTTATGAAAT
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>592.1

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>593.1

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594 2

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CTGTCCAATAGAACTTTCTGTGATGATGAAAAGATTCTACTTTTGA
>595.1

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>596.1

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>599.1

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CCAGGAATCCATAACACTGGAGGATGTGGCTGTGGACTTCACTTGGGAGG
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TTGGAGAACTACAGCAACCTGGTGGCAGTGGGGTATCAAGCCAGCAAACC
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>600.1

## Table 3

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>601.1

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>601.2

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>602.1

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>603.2

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>604.1

>605.1

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AATGTGATGGTCAAATTCAGATCCCGAGGTTTCAGAAAATCCCCCAGGAA
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>606.1

## Table 3

>607 1

>608.1

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GAAAATAGAAATAGTGCAGTTTGCTAGCCGGACACGCCAACTCTTCGTTC
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>609.1

>610.1

>613.1

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### Table 3

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>615.1

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>616.

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>617.2

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TTCAA

>618.1

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>619.2

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GCTGCAGGAAATGTAACCTATGAAATTTTCTCAAATTAGCTTTCAGACAC
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CTTCAAAGAAGCTGATGAGCTCTCCCGTGGACTTACTTTGACAATGTTGG
AAGAATCTGGCTGGCTAGTCTGAACTGGAGTGGCTTGAGAACTCTGGGCT
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GCAGAGGTATAAACTGATTGTGCACACCCCCTGGTATTCCCCCAGCCATG
GGCATGGTCCCAGAATATAAAGTATGATGGAAGGGCTTCCCAGGAACTGG
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CGCGGTGGCGGCCGAGGTTAACGACGCCTGCCCATGACAGAGCCTAGGAA ATCGCGATGACAGTTTACAGCAGGTAAAATCCGGTGGAGACCAGCAGCAT CCCCGAGAAGCCGTGCGATTGTTTGGGCGTATGTAACTCGCTGGTACTCT TGCGCCAG

>622.1

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TCT

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>626.1

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>627.1

>628.1

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CATGGCGGTACCT

>629.1

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>630.1

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#### Table 3

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>631.1

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>634.1

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>638.1

>639.1

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>643.1

#### Table 3

>644.1

>645.1

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ACAAAGTCATGAGAAATGCCAGGCTTCCTGTTACACCCAAAGACTGCTGG
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>647.1

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>650.1

**GT** 

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#### Table 3

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TGTGCCATCAGGTGAACTTCGTCATGTGGAAGCACCATTATTCTACACA
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TAAAATTTGTATTTCTTTCATTACAAATAAGATTGTTATGTCAGTATTGT
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>655.1

>656.1

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## Table 3

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>658.2

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>659.1

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>663.1
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## Table 3

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>677.1
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>678.1

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>680.1

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>682.1

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>684.2

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### Table 3

>690.1

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## Table 3

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>695.1

>696.1

>697.1

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>698.2

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>699.2

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## Table 3

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>701.5

>701.3

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# Table 3

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## Table 3

>729.1

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>732 1

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## Table 3

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### Table 3

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>748.1

>752.1

>753.1

>754.1

>755.1

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## Table 3

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GGA

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# Table 3

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## Table 3

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CAGAGTCTGGAGGCTTCTCTTTTTAAAAATTGCTAGGCTCCTGCCAAATG
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TTGATTACCAAATATCCCAGTAGGGTAGAGATGCTTATATACCCCACCTC
TTAAGAGAGAGGGAAGTGGATGATTTTAGGGGGAATAAAAACTTT

ACTATCCCCTACCTATAAGGCATTTATAATGTGCTGGGCATTGTGACACT TTTCATATTATCTCATGAAATCCTCAC

>808.2

>808.3

>809.1

>810.1

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>810.2

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>811.1

>813.1

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>814.1

>815.1

>816.1

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ATA

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>817.2

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>819.1

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>820.1

>821.1

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>823.1

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>825.1

>826.1

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ATCCTAGAAGCTTCTCTATTACCACAGTAACTGGCTAACTAGATATGATC
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# Table 3

>827.1

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TTGAATATGATTTGAATTAATATAGAAAAGTGCATTTTTTCCAGTTTTTT
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GGCACA

>828.1

>829.1

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#### Table 4

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NCGCCTGTGGGAGGACGTCCGGGTGGGCGGAACTCCTAGCGGACACCTCGTGGA GTCCGGCCGGAAGAGCAACCGAGATGAAGGTGAAGATGCTGAGCCGGAATCCGGACAATT ATGTCCGCGAAACCAAGTTGGACTTACAGAGAGTTCCAAGAAACTATGATCCTGCTTTACAT CCTTTTGAGGTCCCACGAGAATATATAAGAGCTTTAAATGCTACCAAACTGGAACGAGTATTT GCAAAACCATTCCTTGCTTCGCTGGATGGTCACCGTGATGGAGTCAATTGCTTGGCAAAGCA TCCAGAGAAGCTGGCTACTGTCCTTTCTGGGGCGTGTGATGGAGGGTTAGAATTTGGAAT CTAACTCAGCGGAATTGTATCCGTACAATACAAGCACATGAAGGCTTTGTACGAGGAATATG TACTCGCTTTTGTGGGACTTCTTTTTTCACTGTTGGTGATGACAAAACTGTGAAGCAGTGGAA GTGTATACTGGGATTGATCATCACTGGAAAGAAGCTGTTTTTGCCACATGTGGACAGCAAGT AGACATTTGGGATGAACAAAGAACTAATCCTATATGTTCAATGACCTGGGGATTTGACAGTAT AAGTAGTGTTAAATTTAACCCAATTGAGACATTTCTCTTGGGAAGTTGTGCATCTGACAGGAA TATAGTACTGTACGATATGAGGCAAGCTACTCCTTTGAAAAAGGTTATCTTAGATATGAGAAC AAATACAATCTGTTGGAACCCTATGGAAGCTTTCATTTTTACAGCAGCAAATGAAGATTATAA CTTATATACTTTTGATATGCGTGCACTGGACACTCCTGTAATGGTCCATATGGATCATGTATC TGCAGTGCTTGATGTGGATTACTCTCCCACTGGGAAGGAGTTTGTGTCTGCTAGTTTCGATA AATCTATTCGAATCTTTCCTGTAGACAAAAGTCGAAGCAGGGAGGTATATCATACAAAGAGAA TGCAACATGTTATCTGTGTAAAATGGACTTCTGACAGCAAGTATATTATGTGTGGATCTGATG AAATGAACATTCGCCTGTGGAAAGCTAATGCTTCTGAAAAATTGGGTGTGCTTACATCACGA GAAAAAGCAGCCAAGGATTATAACCAGAAATTGAAGGAGAAATTTCAGCATTATCCTCATATA CATCATGAAAGAAGCTCGTCGACGAAAGGAAGTGAATCGTATTAAACACAGCAAGCCTGGAT CTGTGCCACTTGTGTCAGAGAAGAAGAACACGTAGTGGCAGTTGTAAAATAATTGGTATTC CTAACAATCCTGATGTATAATTATTTGTTACTTTTGATTTGAGAACTCTACAAATAAAAGTGCT GGGACTAGATTAATTGCAAACATTTTAGTTATATGTGTAGAGCTTTATTGTTACTCCTTTTAGC TACCCTGAAAAATGATCCTTAAAGGTGGCCTAGTTGGTAAGACTGTTTTATCCTTAATCTGCA TTCTTCTTTCATTGTAGAATACAGTATTTGCAACTCATTTTTTCTTGTTTTTATTACAGATATAC TTACTTTCTCTTTGATCTATTATTGTAGACACTATACATTCAAATTGACATTTAAGACCAAACAT CTCTTATGTTATCTTTAATATTACTTTGAATAATGATTGCAATGATGTTTCTTCCTGTGATTCCA NNN

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## Table 4

CCAGAGCCGGACTGCATTGACGGAGACCATCACCCCAGAGACACTAAGACCGGAGTTAAGG TTCTAATGACTTCATTAAGTCTGGCCTTGAAAATGAGAGGTCTGGATGGCTTCTGATTTTCAG CTGCAGTACATCCCCTTCAGAGCCTACCAAGGCCACCATGCCATGAAGAGCTGCCAGACAA CCAAGTCTTCAGCTTTTCCATGTCCACACACAGACAATCCATGAACTATGTTTCCTAAAGCCA GGGCAAAACCTGAAGTCTGCTGGCTATTCTCCACTAACAGTCGAAGCTTGTTCATAACATCC GTAGGCAAGGACCTCCTGAAACGTTCTGCTCTGGCTCCCGCTGTCATCTACGTGCGCAGAC AGCTTCCGGAGCAATGCTGCTACGTGAACGCGGGACTGCATTTGGCTGCTGTGGCTCATGA GGGACAGACAAGTCCAACTCCCAATATACAGCCCGTGTTGTATTCAAGACTAGTGTCAAAG CAGCAATTTTCCAGGGCATCCAACGACTTCATCAGAAGAAGGTTCATCTCTTGGCCAGATAT ATCACTGAGTTTCTCTCACACAAGCGAGAGAGAACATCCCTAAAGCAAGGCCCATGTGGA TTTGCACGGCTTGAGACTCATCAGCACTTGGTTTCCCAGGTAACCTGGCAGTCAGCATGTTC AGGATTTCCTCAACCTTCTCTTTGCAAGAGATAATGAAAACTGGCACAAGGAGAGACAAAGC CGTGGCGGCAGCAGAACGGGCAATGGCACTAGCTGTTTTTCACCAGAATAGGACTTATAA TAAAACCAGGAGAGAAGTTGCCCTCTGGGTTGGTAATGGCTATCCACAATGACCAAGAGTGT ATCAAGTACCATGGAAACCCACTCTTCATTGAAAGGAAATTAGGTTGAACCTCCAGGAGCC CGTCAGAGTCTGAGGAGAGGCTGGCTTCATGTCTAGATACGACGACAGCAAGGCTGCTTAG AGCTAACAGCGCATTGCCTTTCACTACCGGACTCTCCTTTGCAGCTGCCTTGGTGATCTCAT CAGTCAGCATGTCTCTAACCCAGAGCCAGGCTGTGCTTTTTTTGTACTGCACCTCCTCAGGT TCTTCTTTTCCATGTTTTAACTGCAACTCCAGCTCTCCTAGTCTTCCCTGTAAAATGGCATGAT AAGCTCGATTCATGTATGCAAGCCAGGCCTGTGGAAGAAAAATTGCACGGTGCCACTCTGAA **AGCTGGATCAGACN** 

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NCGTCCGTCACGCGTCCGCCACGCGTCCGCCGATGGATCGCTTGAGGTCAGGC TGGTCTCAAACTCCTGACCTCAAGTGATCTGCCCGCCTCGGCCTCCCAAAGTACTGGGATTA TAGCTGTGAGCCACTGCACCCTCCCGGAAATGCTTTTTAACGGTCACCTCCTAGGGGAGAT GAAGAGAGTTACCGCATAATCAGTTTTAACTGTATTTGTAATGTTTCTTTACCTGGGAG GATATGTTGTAGATACGTGAGATAGAATACCTAAGTGACACAATGGTGTGCAGGCTATGGCT GCAAAGTAGAAAGTTTCTAAATAGCATGCTTGGATTTTTATTTGAATTGGATGAAGTTTTTGTG TCCTAGAGAAATTCACAAAATGTTCCTAGTTTCAGATAAAAGGTTATGATTTAACATCTTTGCT TTTGTTCTTCTTGTCTTTGAATAGAACAGTGGGGGACGGTAAGGTCTGTTTGCAAAGTACCT ATGACCATCTTACATTATTTTTATGGGTGGGGGGCATTGACTGTGGAATGTGGGCAGTAACT TGCACAGTCAGTAACCGTTTGAGTAACTTCTTGTTGGCATCCCCATTCTGGCACTCCTCCTCT AGGTCTCCACCTCACACGCTGGTTTGTGGGCGGAGGGCAGGTTGGTGCGTGGGGTGTCC GGGCACTGGCTGTGCATGCCTTCTTCCTCTTCTGTCTCTTGGCCACCTTTTCCAAAAAGTCA CCAGTGACCAATTCTCCCAGTGTTTCTTTGGGACTCAATGCCTTGGGCTTGGCATTGGGTAA AGCCAACTGGCCAGTTTCATTCTGACGAGCTCTATAGTAGTCCGGTGTGGACCTCTGCCCTC CCTGCTCTGCGGAAGCTTCCTCAGCCTTTGCTTCTCACTATTTACTATTTGCGGGTCCTGGG GGTACCCAGCGTCTCAGGGTTTTGGCTGCCCACCTGTACGTCGGTCCTTTCAAACTGTGGT **AAGTCTTGCTGTTGTCCAGCCTGGATTCAAACTCCTGAGCTCAAGGAATCCN** 

# Table 4

TATAGTACTGTACGATATGAGGCAAGCTACTCCTTTGAAAAAGGTTATCTTAGATATGAGAAC AAATACAATCTGTTGGAACCCTATGGAAGCTTTCATTTTTACAGCAGCAAATGAAGATTATAA CTTATATACTTTTGATATGCGTGCACTGGACACTCCTGTAATGGTCCATATGGATCATGTATC TGCAGTGCTTGATGTGGATTACTCTCCCACTGGGAAGGAGTTTGTGTCTGCTAGTTTCGATA AATCTATTCGAATCTTTCCTGTAGACAAAAGTCGAAGCAGGGAGGTATATCATACAAAGAGAA TGCAACATGTTATCTGTGTAAAATGGACTTCTGACAGCAAGTATATTATGTGTGGATCTGATG AAATGAACATTCGCCTGTGGAAAGCTAATGCTTCTGAAAAATTGGGTGTGCTTACATCACGA GAAAAAGCAGCCAAGGATTATAACCAGAAATTGAAGGAGAAATTTCAGCATTATCCTCATATA CATCATGAAAGAAGCTCGTCGACGAAAGGAAGTGAATCGTATTAAACACAGCAAGCCTGGAT CTGTGCCACTTGTGTCAGAGAAGAAGAACACGTAGTGGCAGTTGTAAAATAATTGGTATTC CTAACAATCCTGATGTATAATTATTTGTTACTTTTGATTTGAGAACTCTACAAATAAAAGTGCT GGGACTAGATTAATTGCAAACATTTTAGTTATATGTGTAGAGCTTTATTGTTACTCCTTTTAGC TACCCTGAAAAATGATCCTTAAAGGTGGCCTAGTTGGTAAGACTGTTTTATCCTTAATCTGCA TTCTTCTTTCATTGTAGAATACAGTATTTGCAACTCATTTTTTCTTGTTTTTATTACAGATATAC TTACTTTCTCTTTGATCTATTGTAGACACTATACATTCAAATTGACATTTAAGACCAAACAT CTCTTATGTTATCTTTAATATTACTTTGAATAATGATTGCAATGATGTTTCTTCCTGTGATTCCA NNN

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>17 >18

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## Table 4

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>24 NNNNNNNNNNNCGCGCCCCGTGTTGCGAAGACGACGGGTCCACAGCTGGGCGC GACCATAGCGGCCTCCCAGCCAGGGGGGGGGCCTACGAGAGGGCCTCACGTGATGGTCA CCACTAAGAGGAGGCACAACGCCTGTTCCCGCAGAAAGCAGGCGCCCCAAAACGCTTCAGA CCAGAGCCGGACTGCATTGACGGAGACCATCACCCCAGAGACACTAAGACCGGAGTTAAGG TTCTAATGACTTCATTAAGTCTGGCCTTGAAAATGAGAGGTCTGGATGGCTTCTGATTTTCAG CTGCAGTACATCCCCTTCAGAGCCTACCAAGGCCACCATGCCATGAAGAGCTGCCAGACAA CCAAGTCTTCAGCTTTTCCATGTCCACACACAGACAATCCATGAACTATGTTTCCTAAAGCCA GGGCAAAACCTGAAGTCTGCTGGCTATTCTCCACTAACAGTCGAAGCTTGTTCATAACATCC GTAGGCAAGGACCTCCTGAAACGTTCTGCTCTGGCTCCCGCTGTCATCTACGTGCGCAGAC AGCTTCCGGAGCAATGCTGCTACGTGAACGCGGGACTGCATTTGGCTGCTGTGGCTCATGA GGGACAGACAAGTCCAACTCCCAATATACAGCCCGTGTTGTATTCAAGACTAGTGTCAAAG CAGCAATTTTCCAGGGCATCCAACGACTTCATCAGAAGAAGGTTCATCTCTTGGCCAGATAT ATCACTGAGTTTCTCTTCACACAGCGAGAGAGACATCCCTAAAGCAAGGCCCATGTGGA TTTGCACGGCTTGAGACTCATCAGCACTTGGTTTCCCAGGTAACCTGGCAGTCAGCATGTTC AGGATTTCCTCAACCTTCTCTTTGCAAGAGATAATGAAAACTGGCACAAGGAGAGACAAAGC CGTGGCGGCAGCAGAACGGGCAATGGCACTAGCTGTTTTTCACCAGAATAGGACTTATAA TAAAACCAGGAGAAGTTGCCCTCTGGGTTGGTAATGGCTATCCACAATGACCAAGAGTGT ATCAAGTACCATGGAAACCCACTCTTTCATTGAAAGGAAATTAGGTTGAACCTCCAGGAGCC CGTCAGAGTCTGAGGAGAGGCTGGCTTCATGTCTAGATACGACGACAGCAAGGCTGCTTAG AGCTAACAGCGCATTGCCTTTCACTACCGGACTCTCCTTTGCAGCTGCCTTGGTGATCTCAT CAGTCAGCATGTCTCTAACCCAGAGCCAGGCTGTGCTTTTTTTGTACTGCACCTCCTCAGGT TCTTCTTTTCCATGTTTTAACTGCAACTCCAGCTCTCCTAGTCTTCCCTGTAAAATGGCATGAT **AAGCTCGATTCATGTATGCAAGCCAGGCCTGTGGAAGAAAAATTGCACGGTGCCACTCTGAA AGCTGGATCAGACN** 

AGACATTTGGGATGAACAAAGAACTAATCCTATATGTTCAATGACCTGGGGATTTGACAGTAT AAGTAGTGTTAAATTTAACCCAATTGAGACATTTCTCTTGGGAAGTTGTGCATCTGACAGGAA TATAGTACTGTACGATATGAGGCAAGCTACTCCTTTGAAAAAGGTTATCTTAGATATGAGAAC AAATACAATCTGTTGGAACCCTATGGAAGCTTTCATTTTTACAGCAGCAAATGAAGATTATAA CTTATATACTTTTGATATGCGTGCACTGGACACTCCTGTAATGGTCCATATGGATCATGTATC TGCAGTGCTTGATGTGGATTACTCTCCCACTGGGAAGGAGTTTGTGTCTGCTAGTTTCGATA AATCTATTCGAATCTTTCCTGTAGACAAAAGTCGAAGCAGGGAGGTATATCATACAAAGAGAA TGCAACATGTTATCTGTGTAAAATGGACTTCTGACAGCAAGTATATTATGTGTGGATCTGATG AAATGAACATTCGCCTGTGGAAAGCTAATGCTTCTGAAAAATTGGGTGTGCTTACATCACGA GAAAAAGCAGCCAAGGATTATAACCAGAAATTGAAGGAGAAATTTCAGCATTATCCTCATATA CATCATGAAAGAAGCTCGTCGACGAAAGGAAGTGAATCGTATTAAACACAGCAAGCCTGGAT CTGTGCCACTTGTGTCAGAGAAGAAGAACACGTAGTGGCAGTTGTAAAATAATTGGTATTC CTAACAATCCTGATGTATAATTATTTGTTACTTTTGATTTGAGAACTCTACAAATAAAAGTGCT GGGACTAGATTAATTGCAAACATTTTAGTTATATGTGTAGAGCTTTATTGTTACTCCTTTTAGC TACCCTGAAAAATGATCCTTAAAGGTGGCCTAGTTGGTAAGACTGTTTTATCCTTAATCTGCA TTCTTCTTTCATTGTAGAATACAGTATTTGCAACTCATTTTTTCTTGTTTTTATTACAGATATAC TTACTTTCTCTTTGATCTATTATTGTAGACACTATACATTCAAATTGACATTTAAGACCAAACAT CTCTTATGTTATCTTTAATATTACTTTGAATAATGATTGCAATGATGTTTCTTCCTGTGATTCCA NNN >27

NCGCCTGTGGGAGGACGTCCGGGTGGGCGGAACTCCTAGCGGACACCTCGTGGA GTCCGGCCGGAAGAGCAACCGAGATGAAGGTGAAGATGCTGAGCCGGAATCCGGACAATT ATGTCCGCGAAACCAAGTTGGACTTACAGAGAGTTCCAAGAAACTATGATCCTGCTTTACAT CCTTTTGAGGTCCCACGAGAATATATAAGAGCTTTAAATGCTACCAAACTGGAACGAGTATTT GCAAAACCATTCCTTGCTTCGCTGGATGGTCACCGTGATGGAGTCAATTGCTTGGCAAAGCA TCCAGAGAAGCTGGCTACTGTCCTTTCTGGGGCGTGTGATGGAGAGGTTAGAATTTGGAAT CTAACTCAGCGGAATTGTATCCGTACAATACAAGCACATGAAGGCTTTGTACGAGGAATATG TACTCGCTTTTGTGGGACTTCTTTTTTCACTGTTGGTGATGACAAAACTGTGAAGCAGTGGAA GTGTATACTGGGATTGATCATCACTGGAAAGAAGCTGTTTTTGCCACATGTGGACAGCAAGT AGACATTTGGGATGAACAAAGAACTAATCCTATATGTTCAATGACCTGGGGATTTGACAGTAT AAGTAGTGTTAAATTTAACCCAATTGAGACATTTCTCTTGGGAAGTTGTGCATCTGACAGGAA TATAGTACTGTACGATATGAGGCAAGCTACTCCTTTGAAAAAGGTTATCTTAGATATGAGAAC AAATACAATCTGTTGGAACCCTATGGAAGCTTTCATTTTTACAGCAGCAAATGAAGATTATAA CTTATATACTTTTGATATGCGTGCACTGGACACTCCTGTAATGGTCCATATGGATCATGTATC TGCAGTGCTTGATGTGGATTACTCTCCCACTGGGAAGGAGTTTGTGTCTGCTAGTTTCGATA **AATCTATTCGAATCTTTCCTGTAGACAAAAGTCGAAGCAGGGAGGTATATCATACAAAGAGAA** TGCAACATGTTATCTGTGAAAATGGACTTCTGACAGCAAGTATATTATGTGTGGATCTGATG AAATGAACATTCGCCTGTGGAAAGCTAATGCTTCTGAAAAATTGGGTGTGCTTACATCACGA GAAAAAGCAGCCAAGGATTATAACCAGAAATTGAAGGAGAAATTTCAGCATTATCCTCATATA CATCATGAAAGAAGCTCGTCGACGAAAGGAAGTGAATCGTATTAAACACAGCAAGCCTGGAT CTGTGCCACTTGTGTCAGAGAAGAAGAACACGTAGTGGCAGTTGTAAAATAATTGGTATTC CTAACAATCCTGATGTATAATTATTTGTTACTTTTGATTTGAGAACTCTACAAATAAAAGTGCT GGGACTAGATTAATTGCAAACATTTTAGTTATATGTGTAGAGCTTTATTGTTACTCCTTTTAGC TACCCTGAAAAATGATCCTTAAAGGTGGCCTAGTTGGTAAGACTGTTTTATCCTTAATCTGCA TTCTTCTTTCATTGTAGAATACAGTATTTGCAACTCATTTTTTCTTGTTTTTATTACAGATATAC TTACTTTCTCTTTGATCTATTGTTGTAGACACTATACATTCAAATTGACATTTAAGACCAAACAT CTCTTATGTTATCTTTAATATTACTTTGAATAATGATTGCAATGATGTTTCTTCCTGTGATTCCA 

#### Table 4

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CGCGGTGGCGGCCGAGGTACGTATGCACTTGCTTGCCATCTAAGCAGGACAATG
GCAGTTCATATCATGATGTTACTTTGATTCTCTGACCAAACTGGCCTGTGAGCACCCTGGGC
CTTTCTTCCTCTGTCAAAGGCCTTAAGACAGGTTTACCCTGTAGCCAGGCTCTGGAAGACAG
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AGGATGTAACACGGGGCCACATCCTATGCCCAATCCCAAGGCAGGGAGGCAGGGAAGTGG
CTGCCAAACCTGTTGTAGGAGAGTAATAAATGACTTGAGAGTAAGCCTAAGCAAACTCAAGT
GGGAAGGGGAGTGGGCTGTAAAATAGTTTAAGAGACTCTCTCAGGAAGTCAGCGTAATTGA
TGTGTAGAAAGGTAACAGTCACAAGTTCTCCTAACAAGACAGCTTCAAAGCAGCAGCTATAG
TGGAGCATTCCTGAGGCCTGCTGCAGATCAAAGCATGAATGTGCAGACTGGTCCTCTTGCC
CAGCGTTTCTTTCAAATCTTTGCACATGTTATATTTTAGAGGCAAGTTCAGTTCTAGAGGAGC
TGGCCTGCCCCACAGACTCACCCCTCAGTCCCAGGCTGACCTTGGTGCCCAGAACTCAGGA
GTTTGTTTACCCTAACTTTGTTTATAAAGTCCAGAATGGGGCCGGGAATGGTGGCTCACACC
TGCAGTCCCAGCACTTTGGGGAAGCT
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CGCGGTGGCGGCCGAGGTACGTATGCACTTGCTTGCCATCTAAGCAGGACAATG
GCAGTTCATATCATGATGTTACTTTGATTCTCTGACCAAACTGGCCTGTGAGCACCCTGGGC
CTTTCTTCCTCTGTCAAAGGCCTTAAGACAGGTTTACCCTGTAGCCAGGCTCTGGAAGACAG
AGCTGGGTTAAAGCTGGGTGGGAGAAGTGAAAAAAGGTCAGGTTTACATTCCTACGCGGAAA
AGGATGTAACACGGGGCCACATCCTATGCCCAATCCCAAGGCAGGAGGCAGGAAGTCG
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GGGAAGGGGAGTGGGCTGTAAAATAGTTTAAGAGACTCTCTCAGGAAGTCAGCGTAATTGA
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GGTGGCGCCCCGGGCTGGTACGCGGGAAAGCAAACGACAAGCACGCCCTG AGCAGAGCCCCGGGAATTCAACCTTTAAGTGGATAACTTGGCTTCTGGTTTGCCAAGGAACC AGGGCATCAAACAGATGAAACAGCCTATTGTCCATTTCAACAGGATTTTTCAGGAGTGGGA TGATCTTCAAATTATCCACAACTTAATTATTTAATATTTTGATAGTCAATTACCTAAGACACG GCATCGTCACTGACCAATCAGAAGAGATGCCAGTAGTTGGGCGCAGTGGCAGCACTTTGGG

## Table 4

NNCACGCGTCCGGCTAATGAATCTTGGGGCCGGTGTCGGGCCGGGGCGGCTTGAT CGGCAACTAGGAAACCCCAGGCGCAGAGGCCAGGAGCGAGGGCAGCGAGGATCAGAGGC CAGGCCTTCCCGGCTGCCGGCGCTCCTCGGAGGTCAGGGCAGATGAGGAACATGACTCTC CCCCTTCGGAGGAGGAAGGAAGTCCCGCTGCCACCTTATCTCTGCTCCTCTGCCTCCCC TGTTCCCAGAGCTTTTTCTCTAGAGAAGATTTTGAAGGCGGCTTTTGTGCTGACGGCCACCC ACCATCATCTAAAGAAGATAAACTTGGCAAATGACATGCAGGTTCTTCAAGGCAGAATAATTG CAGAAAATCTTCAAAGGACCCTATCTGCAGATGTTCTGAATACCTCTGAGAATAGAGATTGAT TATTCAACCAGGATACCTAATTCAAGAACTCCAGAAATCAGGAGACGGAGACATTTTGTCAG TTTTGCAACATTGGACCAAATACAATGAAGTATTCTTGCTGTGCTCTGGTTTTGGCTGTCCTG GGCACAGAATTGCTGGGAAGCCTCTGTTCGACTGTCAGATCCCCGAGGTTCAGAGGACGGA TACAGCAGGAACGAAAAACATCCGACCCAACATTATTCTTGTGCTTACCGATGATCAAGAT GTGGAGCTGGGGTCCCTGCAAGTCATGAACAAAACGAGAAAGATTATGGAACATGGGGGGG CCACCTTCATCAATGCCTTTGTGACTACACCCATGTGCTGCCCGTCACGGTCCTCCATGCTC ACCGGGAAGTATGTGCACAATCACAATGTCTACACCAACAACGAGAACTGCTCTTCCCCCTC GTGGCAGGCCATGCATGAGCCTCGGACTTTTGCTGTATATCTTAACAACACTGGCTACAGAA CAGCCTTTTTTGGAAAATACCTCAATGAATATAATGGCAGCTACATCCCCCCTGGGTGGCGA GAATGGCTTGGATTAATCAAGAATTCTCGCTTCTATAATTACACTGTTTGTCGCAATGGCATC AAAGAAAAGCATGGATTTGATTATGCAAAGGACTACTTCACAGACTTAATCACTAACGAGAGC ATTAATTACTTCAAAATGTCTAAGAGAATGTATCCCCATAGGCCCGTTATGATGGTGATCAGC CACGCTGCGCCCACGGCCCGAGGACTCAGCCCCACAGTTTTCTAAACTGTACCCCAATG CTTCCCAACACATAACTCCTAGTTATAACTATGCACCAAATATGGATAAACACTGGATTATGC AGTACACAGGACCAATGCTGCCCATCCACATGGAATTTACAAACATTCTACAGCGCAAAAGG CTCCAGACTTTGATGTCAGTGGATGATTCTGTGGAGAGGCTGTATAACATGCTCGTGGAGAC GGGGGAGCTGGAGAATACTTACATCATTTACACCGCCGACCATGGTTACCATATTGGGCAGT TTGGACTGGTCAAGGGGAAATCCATGCCATATGACTTTGATATTCGTGTGCCTTTTTTTATTC GTGGTCCAAGTGTAGAACCAGGATCAATAGTCCCACAGATCGTTCTCAACATTGACTTGGCC CCCACGATCCTGGATATTGCTGGGCTCGACACCCTCCTGATGTGGACGGCAAGTCTGTCC GAATATCCAACAGTCAAATCACTTGCCCAAATATGAACGGGTCAAAGAACTATGCCAGCAGG CCAGGTACCAGACAGCCTGTGAACAACCGGGGCAGAAGTGGCAATGCATTGAGGATACATC TGGCAAGCTTCGAATTCACAAGTGTAAAGGACCCAGTGACCTGCTCACAGTCCGGCAGAGC ACGCGGAACCTCTACGCTCGCGGCTTCCATGACAAAGACAAAGAGTGCAGTTGTAGGGAGT CTGGTTACCGTGCCAGCAGAAGCCAAAGAAAGAGTCAACGGCAATTCTTGAGAAACCAGGG GACTCCAAAGTACAAGCCCAGATTTGTCCATACTCGGCAGACACGTTCCTTGTCCGTCGAAT TTGAAGGTGAAATATATGACATAAATCTGGAAGAAGAAGAAGAAGTTGCAAGTGTTGCAACCA AGAAACATTGCTAAGCGTCATGATGAAGGCCACAAGGGGCCAAGAGATCTCCAGGCTTCCA GTGGTGCCACCAGGGCAGGATGCTGGCAGATAGCAGCAACGCCGTGGGCCCACCTACCA TGTACCAATCGGCCAGAGCGTGGAAGGACCATAAGGCATACATTGACAAAGAGATTGAAGC AGGAATGTAGCTGCAGTAAACAAAGCTATTACAATAAAGAGAAAGGTGTAAAAAAAGCAAGAG AAATTAAAGAGCCATCTTCACCCATTCAAGGAGGCTGCTCAGGAAGTAGATAGCAAACTGCA ACTTTTCAAGGAGAACAACCGTAGGAGGAAGAAGGAGGAGGAGGAGAAGACGGCAGAG GAAGGGGGAAGAGTGCAGCCTGCCTGGCCTCACTTGCTTCACGCATGACAACAACCACTGG CAGACAGCCCCGTTCTGGAACCTGGGATCTTTCTGTGCTTGCACGAGTTCTAACAATAACAC CTACTGGTGTTTGCGTACAGTTAATGAGACGCATAATTTTCTTTTCTGTGAGTTTGCTACTGG CTTTTTGGAGTATTTTGATATGAATACAGATCCTTATCAGCTCACAAATACAGTGCACACGGT AGAACGAGGCATTTTGAATCAGCTACACGTACAACTAATGGAGCTCAGAAGCTGTCAAGGAT ATAAGCAGTGCAACCCAAGACCTAAGAATCTTGATGTTGGAAATAAAGATGGAGGAAGCTAT GACCTACACAGAGGACAGTTATGGGATGGATGGGAAGGTTAATCAGCCCCGTCTCACTGCA 

TGCACTGCTGAAGAGTCACTATGAGCAAAATAAAACAAATAAGACTCAAACTGCTCAAAGTG ACGGGTTCTTGGTTGTCTCTGCTGAGCACGCTGTGTCAATGGAGATGGCCTCTGCTGACTC AGATGAAGACCCAAGGCATAAGGTTGGGAAAACACCTCATTTGACCTTGCCAGCTGACCTTC AAACCCTGCATTTGAACCGACCAACATTAAGTCCAGAGAGTAAACTTGAATGGAATAACGAC ATTCCAGAAGTTAATCATTTGAATTCTGAACACTGGAGAAAAACCGAAAAATGGACGGGGCA TGAAGAGACTAATCATCTGGAAACCGATTTCAGTGGCGATGGCATGACAGAGCTAGAGCTC GGGCCCAGCCCAGGCTGCAGCCCATTCGCAGGCACCCGAAAGAACTTCCCCAGTATGGT GGTCCTGGAAAGGACATTTTTGAAGATCAACTATATCTTCCTGTGCATTCCGATGGAATTTCA GTTCATCAGATGTTCACCATGGCCACCGCAGAACACCGAAGTAATTCCAGCATAGCGGGGA AGATGTTGACCAAGGTGGAGAAGAATCACGAAAAGGAGAAGTCACAGCACCTAGAAGGCAG CGCCTCCTCTCACTCCTCTGATTAGATGAAACTGTTACCTTACCCTAAACACAGTATTTC TTTTTAACTTTTTATTTGTAAACTAATAAAGGTAATCACAGCCACCAACATTCCAAGCTACCC TGGGTACCTTTGTGCAGTAGAAGCTAGTGAGCATGTGAGCAAGCGGTGTGCACACGGAGAC TTGGTTTTGATTTTTGCTTGTTTGTTTTGTACTAAAACAGTATTATCTTTTGAATATCGT AGGGACATAAGTATATACATGTTATCCAATCAAGATGGCTATAATGGGCTTTCTCAGAGATAA AACTTGACCCCCGTGTCAAATTGACATCACACTCTGCATGTCTGCGTAATGAAGGTACGATG CAACTATAACCAGTGCAATATGACACTGACACTATATTAAATTCAATAATACNN

NCGCCTGTGGGAGGACGTCCGGGTGGGCGGAACTCCTAGCGGACACCTCGTGGA GTCCGGCCGGAAGACCGAGATGAAGGTGAAGATGCTGAGCCGGAATCCGGACAATT ATGTCCGCGAAACCAAGTTGGACTTACAGAGAGTTCCAAGAAACTATGATCCTGCTTTACAT CCTTTTGAGGTCCCACGAGAATATATAAGAGCTTTAAATGCTACCAAACTGGAACGAGTATTT GCAAAACCATTCCTTGCTTCGCTGGATGGTCACCGTGATGGAGTCAATTGCTTGGCAAAGCA TCCAGAGAAGCTGGCTACTGTCCTTTCTGGGGCCGTGTGATGGAGAGGTTAGAATTTGGAAT CTAACTCAGCGGAATTGTATCCGTACAATACAAGCACATGAAGGCTTTGTACGAGGAATATG TACTCGCTTTTGTGGGACTTCTTTTTTCACTGTTGGTGATGACAAAACTGTGAAGCAGTGGAA GTGTATACTGGGATTGATCATCACTGGAAAGAAGCTGTTTTTGCCACATGTGGACAGCAAGT AGACATTTGGGATGAACAAAGAACTAATCCTATATGTTCAATGACCTGGGGATTTGACAGTAT AAGTAGTGTTAAATTTAACCCAATTGAGACATTTCTCTTGGGAAGTTGTGCATCTGACAGGAA TATAGTACTGTACGATATGAGGCAAGCTACTCCTTTGAAAAAGGTTATCTTAGATATGAGAAC **AAATACAATCTGTTGGAACCCTATGGAAGCTTTCATTTTTACAGCAGCAAATGAAGATTATAA** CTTATATACTTTTGATATGCGTGCACTGGACACTCCTGTAATGGTCCATATGGATCATGTATC TGCAGTGCTTGATGTGGATTACTCTCCCACTGGGAAGGAGTTTGTGTCTGCTAGTTTCGATA AATCTATTCGAATCTTTCCTGTAGACAAAAGTCGAAGCAGGGAGGTATATCATACAAAGAGAA TGCAACATGTTATCTGTGTAAAATGGACTTCTGACAGCAAGTATATTATGTGTGGATCTGATG AAATGAACATTCGCCTGTGGAAAAGCTAATGCTTCTGAAAAATTGGGTGTGCTTACATCACGA GAAAAAGCAGCCAAGGATTATAACCAGAAATTGAAGGAGAAATTTCAGCATTATCCTCATATA CATCATGAAAGAAGCTCGTCGACGAAAGGAAGTGAATCGTATTAAACACAGCAAGCCTGGAT CTGTGCCACTTGTGTCAGAGAAGAAGAACACGTAGTGGCAGTTGTAAAATAATTGGTATTC CTAACAATCCTGATGTATAATTATTTGTTACTTTTGATTTGAGAACTCTACAAATAAAAGTGCT GGGACTAGATTAATTGCAAACATTTTAGTTATATGTGTAGAGCTTTATTGTTACTCCTTTTAGC TACCCTGAAAAATGATCCTTAAAGGTGGCCTAGTTGGTAAGACTGTTTTATCCTTAATCTGCA

#### Table 4

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NCGCCTGTGGGAGGACGTCCGGGTGGCGGAACTCCTAGCGGACACCTCGTGGA GTCCGGCCGAAGAGCAACCGAGATGAAGGTGAAGATGCTGAGCCGGAATCCGGACAATT ATGTCCGCGAAACCAAGTTGGACTTACAGAGAGTTCCAAGAAACTATGATCCTGCTTTACAT CCTTTTGAGGTCCCACGAGAATATATAAGAGCTTTAAATGCTACCAAACTGGAACGAGTATTT GCAAAACCATTCCTTGCTTCGCTGGATGGTCACCGTGATGGAGTCAATTGCTTGGCAAAGCA TCCAGAGAAGCTGGCTACTGTCCTTTCTGGGGCGTGTGATGGAGAGGTTAGAATTTGGAAT CTAACTCAGCGGAATTGTATCCGTACAATACAAGCACATGAAGGCTTTGTACGAGGAATATG TACTCGCTTTTGTGGGACTTCTTTTTTCACTGTTGGTGATGACAAAACTGTGAAGCAGTGGAA GTGTATACTGGGATTGATCATCACTGGAAAGAAGCTGTTTTTGCCACATGTGGACAGCAAGT AGACATTTGGGATGAACAAAGAACTAATCCTATATGTTCAATGACCTGGGGATTTGACAGTAT AAGTAGTGTTAAATTTAACCCAATTGAGACATTTCTCTTGGGAAGTTGTGCATCTGACAGGAA TATAGTACTGTACGATATGAGGCAAGCTACTCCTTTGAAAAAGGTTATCTTAGATATGAGAAC AAATACAATCTGTTGGAACCCTATGGAAGCTTTCATTTTTACAGCAGCAAATGAAGATTATAA CTTATATACTTTTGATATGCGTGCACTGGACACTCCTGTAATGGTCCATATGGATCATGTATC TGCAGTGCTTGATGTGGATTACTCTCCCACTGGGAAGGAGTTTGTGTCTGCTAGTTTCGATA AATCTATTCGAATCTTTCCTGTAGACAAAAGTCGAAGCAGGGAGGTATATCATACAAAGAGAA TGCAACATGTTATCTGTGTAAAATGGACTTCTGACAGCAAGTATATTATGTGTGGATCTGATG AAATGAACATTCGCCTGTGGAAAGCTAATGCTTCTGAAAAATTGGGTGTGCTTACATCACGA GAAAAAGCAGCCAAGGATTATAACCAGAAATTGAAGGAGAAATTTCAGCATTATCCTCATATA CATCATGAAAGAAGCTCGTCGACGAAAGGAAGTGAATCGTATTAAACACAGCAAGCCTGGAT CTGTGCCACTTGTGTCAGAGAAGAAGAACACGTAGTGGCAGTTGTAAAATAATTGGTATTC CTAACAATCCTGATGTATAATTATTTGTTACTTTTGATTTGAGAACTCTACAAATAAAAGTGCT GGGACTAGATTAATTGCAAACATTTTAGTTATATGTGTAGAGCTTTATTGTTACTCCTTTTAGC TACCCTGAAAAATGATCCTTAAAGGTGGCCTAGTTGGTAAGACTGTTTTATCCTTAATCTGCA TTCTTCTTTCATTGTAGAATACAGTATTTGCAACTCATTTTTCTTGTTTTTATTACAGATATAC TTACTTTCTCTTTGATCTATTATTGTAGACACTATACATTCAAATTGACATTTAAGACCAAACAT CTCTTATGTTATCTTTAATATTACTTTGAATAATGATTGCAATGATGTTTCTTCCTGTGATTCCA **NNN** 

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NAGTATTGGTTCTGCTGGCAGATGCCCTGTGCTGGGGTCTAGATGACGTGGTGGGC
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CTCTCTATGTCCACTTCAACCGCAGTCTCTGGGCACGGATAGAGAAATACGGCCAGGGCCG
GCTGCAGACAGCTGTGGCCGAGCTCCGGGCTCGCCGAGAGGCCCTAGCGAAACATTGTCT
GGTAGGGGGTGAGGCTTCTGACCCCAAATACATCACTGATCGCCGGTTCCGCCCTTCCAG
TTTGGGTCAGCTAAGGTTTTGGGCTATATACTTCGGAGTGGATTGAGCCCCCAAGACCAAGA
GGAATGTGAGCGCCTAGCTACCCCTGAGCTCCAGTACAAGGACAAGCTGCCCATAAACATCAGA
CTACAGATTTAGGTGGAAGAGCAGCCATGTTTGAAGGCCACTTTCCCCATAAACATCAGA
CTACAGATTTAGGTGGAAGAGCAGCCATGTTTGAAGGCCACTGTGATGAGTGGGGGGCAG

NNCACGCGTCCGGCTAATGAATCTTGGGGCCGGTGTCGGGCCGGGGCGGCTTGAT CGGCAACTAGGAAACCCCAGGCGCAGAGGCCAGGAGGCGAGGAGCGAGGATCAGAGGC CAGGCCTTCCCGGCTGCCGGCGCTCCTCGGAGGTCAGGGCAGATGAGGAACATGACTCTC TGTTCCCAGAGCTTTTCTCTAGAGAAGATTTTGAAGGCGGCTTTTGTGCTGACGGCCACCC ACCATCATCTAAAGAAGATAAACTTGGCAAATGACATGCAGGTTCTTCAAGGCAGAATAATTG CAGAAAATCTTCAAAGGACCCTATCTGCAGATGTTCTGAATACCTCTGAGAATAGAGATTGAT TATTCAACCAGGATACCTAATTCAAGAACTCCAGAAATCAGGAGACGGAGACATTTTGTCAG TTTTGCAACATTGGACCAAATACAATGAAGTATTCTTGCTGTGCTCTGGTTTTGGCTGTCCTG GGCACAGAATTGCTGGGAAGCCTCTGTTCGACTGTCAGATCCCCGAGGTTCAGAGGACGGA TACAGCAGGAACGAAAAAACATCCGACCCAACATTATTCTTGTGCTTACCGATGATCAAGAT GTGGAGCTGGGGTCCCTGCAAGTCATGAACAAAACGAGAAAGATTATGGAACATGGGGGGG CCACCTTCATCAATGCCTTTGTGACTACACCCATGTGCTGCCCGTCACGGTCCTCCATGCTC ACCGGGAAGTATGTGCACAATCACAATGTCTACACCAACAACGAGAACTGCTCTTCCCCCTC GTGGCAGGCCATGCATGAGCCTCGGACTTTTGCTGTATATCTTAACAACACTGGCTACAGAA CAGCCTTTTTTGGAAAATACCTCAATGAATATAATGGCAGCTACATCCCCCCTGGGTGGCGA GAATGGCTTGGATTAATCAAGAATTCTCGCTTCTATAATTACACTGTTTGTCGCAATGGCATC AAAGAAAAGCATGGATTTGATTATGCAAAGGACTACTTCACAGACTTAATCACTAACGAGAGC ATTAATTACTTCAAAATGTCTAAGAGAATGTATCCCCATAGGCCCGTTATGATGGTGATCAGC CACGCTGCGCCCCACGGCCCCGAGGACTCAGCCCCACAGTTTTCTAAACTGTACCCCAATG CTTCCCAACACATAACTCCTAGTTATAACTATGCACCAAATATGGATAAACACTGGATTATGC AGTACACAGGACCAATGCTGCCCATCCACATGGAATTTACAAACATTCTACAGCGCAAAAGG CTCCAGACTTTGATGTCAGTGGATGATTCTGTGGAGAGGCTGTATAACATGCTCGTGGAGAC GGGGGAGCTGGAGAATACTTACATCATTTACACCGCCGACCATGGTTACCATATTGGGCAGT TTGGACTGGTCAAGGGGAAATCCATGCCATATGACTTTGATATTCGTGTGCCTTTTTTATTC GTGGTCCAAGTGTAGAACCAGGATCAATAGTCCCACAGATCGTTCTCAACATTGACTTGGCC CCCACGATCCTGGATATTGCTGGGCTCGACACCCTCCTGATGTGGACGGCAAGTCTGTCC GAATATCCAACAGTCAAATCACTTGCCCAAATATGAACGGGTCAAAGAACTATGCCAGCAGG CCAGGTACCAGACAGCCTGTGAACAACCGGGGCAGAAGTGGCAATGCATTGAGGATACATC TGGCAAGCTTCGAATTCACAAGTGTAAAGGACCCAGTGACCTGCTCACAGTCCGGCAGAGC ACGCGGAACCTCTACGCTCGCGGCTTCCATGACAAAGACAAAGAGTGCAGTTGTAGGGAGT CTGGTTACCGTGCCAGCAGAAGCCAAAGAAGAAGAGTCAACGGCAATTCTTGAGAAACCAGGG GACTCCAAAGTACAAGCCCAGATTTGTCCATACTCGGCAGACACGTTCCTTGTCCGTCGAAT TTGAAGGTGAAATATATGACATAAATCTGGAAGAAGAAGAAGAATTGCAAGTGTTGCAACCA AGAAACATTGCTAAGCGTCATGATGAAGGCCACAAGGGGCCAAGAGATCTCCAGGCTTCCA GTGGTGGCAACAGGGCAGGATGCTGGCAGATAGCAGCAACGCCGTGGGCCCACCTACCA TGTACCAATCGGCCAGAGCGTGGAAGGACCATAAGGCATACATTGACAAAGAGATTGAAGC AGGAATGTAGCTGCAGTAAACAAAGCTATTACAATAAAGAGAAAGGTGTAAAAAAGCAAGAG AAATTAAAGAGCCATCTTCACCCATTCAAGGAGGCTGCTCAGGAAGTAGATAGCAAACTGCA GAAGGGGGAAGAGTGCAGCCTGCCTGGCCTCACTTGCTTCACGCATGACAACAACCACTGG CAGACAGCCCCGTTCTGGAACCTGGGATCTTTCTGTGCTTGCACGAGTTCTAACAATAACAC CTACTGGTGTTTGCGTACAGTTAATGAGACGCATAATTTTCTTTTCTGTGAGTTTGCTACTGG CTTTTTGGAGTATTTGATATGAATACAGATCCTTATCAGCTCACAAATACAGTGCACACGGT AGAACGAGGCATTTTGAATCAGCTACACGTACAACTAATGGAGCTCAGAAGCTGTCAAGGAT ATAAGCAGTGCAACCCAAGACCTAAGAATCTTGATGTTGGAAATAAAGATGGAGGAAGCTAT

#### Table 4

GACCTACACAGAGGACAGTTATGGGATGGATGGGAAGGTTAATCAGCCCCGTCTCACTGCA TGCACTGCTGAAGAGTCACTATGAGCAAAATAAAACAAATAAGACTCAAACTGCTCAAAGTG ACGGGTTCTTGGTTGTCTCTGCTGAGCACGCTGTGTCAATGGAGATGGCCTCTGCTGACTC AGATGAAGACCCAAGGCATAAGGTTGGGAAAACACCTCATTTGACCTTGCCAGCTGACCTTC AAACCCTGCATTTGAACCGACCAACATTAAGTCCAGAGAGTAAACTTGAATGGAATAACGAC ATTCCAGAAGTTAATCATTTGAATTCTGAACACTGGAGAAAAACCGAAAAATGGACGGGGCA TGAAGAGACTAATCATCTGGAAACCGATTTCAGTGGCGATGGCATGACAGAGCTAGAGCTC GGGCCCAGCCCCAGGCTGCAGCCCATTCGCAGGCACCCGAAAGAACTTCCCCAGTATGGT GGTCCTGGAAAGGACATTTTTGAAGATCAACTATATCTTCCTGTGCATTCCGATGGAATTTCA GTTCATCAGATGTTCACCATGGCCACCGCAGAACACCGAAGTAATTCCAGCATAGCGGGGA AGATGTTGACCAAGGTGGAGAAGAATCACGAAAAGGAGAAGTCACAGCACCTAGAAGGCAG CGCCTCCTCTCACTCTCTCTGATTAGATGAAACTGTTACCTTACCCTAAACACAGTATTTC TTTTTAACTTTTTATTTGTAAACTAATAAAGGTAATCACAGCCACCAACATTCCAAGCTACCC TGGGTACCTTTGTGCAGTAGAAGCTAGTGAGCATGTGAGCAAGCGGTGTGCACACGGAGAC TTGGTTTTGATTTTTTGCTTGTTTGTTTTGTACTAAAACAGTATTATCTTTTGAATATCGT AGGGACATAAGTATATACATGTTATCCAATCAAGATGGCTATAATGGGCTTTCTCAGAGATAA AACTTGACCCCGTGTCAAATTGACATCACACTCTGCATGTCTGCGTAATGAAGGTACGATG CAACTATAACCAGTGCAATATGACACTGACACTATATTAAATTCAATAATACNN

NCGCCTGTGGGAGGACGTCCGGGTGGGCGGAACTCCTAGCGGACACCTCGTGGA GTCCGGCCGAAGAGCAACCGAGATGAAGGTGAAGATGCTGAGCCGGAATCCGGACAATT ATGTCCGCGAAACCAAGTTGGACTTACAGAGAGTTCCAAGAAACTATGATCCTGCTTTACAT CCTTTTGAGGTCCCACGAGAATATATAAGAGCTTTAAATGCTACCAAACTGGAACGAGTATTT GCAAAACCATTCCTTGCTTCGCTGGATGGTCACCGTGATGGAGTCAATTGCTTGGCAAAGCA TCCAGAGAGCTGGCTACTGTCCTTTCTGGGGCGTGTGATGGAGAGGTTAGAATTTGGAAT CTAACTCAGCGGAATTGTATCCGTACAATACAAGCACATGAAGGCTTTGTACGAGGAATATG TACTCGCTTTTGTGGGACTTCTTTTTTCACTGTTGGTGATGACAAAACTGTGAAGCAGTGGAA GTGTATACTGGGATTGATCACTGGAAAGAAGCTGTTTTTGCCACATGTGGACAGCAAGT AGACATTTGGGATGAACAAAGAACTAATCCTATATGTTCAATGACCTGGGGATTTGACAGTAT AAGTAGTGTTAAATTTAACCCAATTGAGACATTTCTCTTGGGAAGTTGTGCATCTGACAGGAA TATAGTACTGTACGATATGAGGCAAGCTACTCCTTTGAAAAAGGTTATCTTAGATATGAGAAC AAATACAATCTGTTGGAACCCTATGGAAGCTTTCATTTTTACAGCAGCAAATGAAGATTATAA CTTATATACTTTTGATATGCGTGCACTGGACACTCCTGTAATGGTCCATATGGATCATGTATC TGCAGTGCTTGATGTGGATTACTCTCCCACTGGGAAGGAGTTTGTGTCTGCTAGTTTCGATA **AATCTATTCGAATCTTTCCTGTAGACAAAAGTCGAAGCAGGGAGGTATATCATACAAAGAGAA** TGCAACATGTTATCTGTGTAAAATGGACTTCTGACAGCAAGTATATTATGTGTGGATCTGATG **AAATGAACATTCGCCTGTGGAAAGCTAATGCTTCTGAAAAATTGGGTGTGCTTACATCACGA** GAAAAAGCAGCCAAGGATTATAACCAGAAATTGAAGGAGAAATTTCAGCATTATCCTCATATA CATCATGAAAGAAGCTCGTCGACGAAAGGAAGTGAATCGTATTAAACACAGCAAGCCTGGAT CTGTGCCACTTGTGTCAGAGAAGAAGAACACGTAGTGGCAGTTGTAAAATAATTGGTATTC CTAACAATCCTGATGTATAATTATTTGTTACTTTTGATTTTGAGAACTCTACAAATAAAAGTGCT GGGACTAGATTAATTGCAAACATTTTAGTTATATGTGTAGAGCTTTATTGTTACTCCTTTTAGC TACCCTGAAAAATGATCCTTAAAGGTGGCCTAGTTGGTAAGACTGTTTTATCCTTAATCTGCA TTCTTCTTTCATTGTAGAATACAGTATTTGCAACTCATTTTTTCTTGTTTTTATTACAGATATAC TTACTTTCTCTTTGATCTATTGTAGACACTATACATTCAAATTGACATTTAAGACCAAACAT CTCTTATGTTATCTTTAATATTACTTTGAATAATGATTGCAATGATGTTTCTTCCTGTGATTCCA NNN

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NCGCCTGTGGGAGGACGTCCGGGTGGGCGGAACTCCTAGCGGACACCTCGTGGA GTCCGGCCGGAAGAGCAACCGAGATGAAGGTGAAGATGCTGAGCCGGAATCCGGACAATT ATGTCCGCGAAACCAAGTTGGACTTACAGAGAGTTCCAAGAAACTATGATCCTGCTTTACAT CCTTTTGAGGTCCCACGAGAATATATAAGAGCTTTAAATGCTACCAAACTGGAACGAGTATTT GCAAAACCATTCCTTGCTTCGCTGGATGGTCACCGTGATGGAGTCAATTGCTTGGCAAAGCA TCCAGAGAAGCTGGCTACTGTCCTTTCTGGGGCGTGTGATGGAGAGGTTAGAATTTGGAAT CTAACTCAGCGGAATTGTATCCGTACAATACAAGCACATGAAGGCTTTGTACGAGGAATATG TACTCGCTTTTGTGGGACTTCTTTTTTCACTGTTGGTGATGACAAAACTGTGAAGCAGTGGAA GTGTATACTGGGATTGATCATCACTGGAAAGAAGCTGTTTTTGCCACATGTGGACAGCAAGT AGACATTTGGGATGAACAAAGAACTAATCCTATATGTTCAATGACCTGGGGATTTGACAGTAT AAGTAGTGTTAAATTTAACCCAATTGAGACATTTCTCTTGGGAAGTTGTGCATCTGACAGGAA TATAGTACTGTACGATATGAGGCAAGCTACTCCTTTGAAAAAGGTTATCTTAGATATGAGAAC AAATACAATCTGTTGGAACCCTATGGAAGCTTTCATTTTTACAGCAGCAAATGAAGATTATAA CTTATATACTTTTGATATGCGTGCACTGGACACTCCTGTAATGGTCCATATGGATCATGTATC TGCAGTGCTTGATGTGGATTACTCTCCCACTGGGAAGGAGTTTGTGTCTGCTAGTTTCGATA AATCTATTCGAATCTTTCCTGTAGACAAAAGTCGAAGCAGGGAGGTATATCATACAAAGAGAA TGCAACATGTTATCTGTGTAAAATGGACTTCTGACAGCAAGTATATTATGTGTGGATCTGATG AAATGAACATTCGCCTGTGGAAAGCTAATGCTTCTGAAAAATTGGGTGTGCTTACATCACGA GAAAAAGCAGCCAAGGATTATAACCAGAAATTGAAGGAGAAATTTCAGCATTATCCTCATATA CATCATGAAAGAAGCTCGTCGACGAAAGGAAGTGAATCGTATTAAACACAGCAAGCCTGGAT CTGTGCCACTTGTGTCAGAGAAGAAGAACACGTAGTGGCAGTTGTAAAATAATTGGTATTC CTAACAATCCTGATGTATAATTATTTGTTACTTTTGATTTGAGAACTCTACAAATAAAAGTGCT GGGACTAGATTAATTGCAAACATTTTAGTTATATGTGTAGAGCTTTATTGTTACTCCTTTTTAGC TACCCTGAAAAATGATCCTTAAAGGTGGCCTAGTTGGTAAGACTGTTTTATCCTTAATCTGCA TTCTTCTTTCATTGTAGAATACAGTATTTGCAACTCATTTTTTCTTGTTTTTATTACAGATATAC TTACTTTCTCTTTGATCTATTATTGTAGACACTATACATTCAAATTGACATTTAAGACCAAACAT CTCTTATGTTATCTTTAATATTACTTTGAATAATGATTGCAATGATGTTTCTTCCTGTGATTCCA TTTGGCTTTTTGACTCTTTTAAAACAATCAGCCTGCATTTATAAACTTTTATAAAATAATAATAT NNN

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## Table 4

TCCATTAAATGCTGCTCGTTGCCAAGATGAAAAGGCACACCTTCCAACCATGAAATCCTTTG GTACTCACAGGAGAGTGACCCACAAACCAAATCTGTTGGGTTCTAAATGGTTTATAAAAAATAT TAAAGAGGCATTTCTCATCTGTATCAACGGAAACATTTGTTCCAAAACAAGACTTCCCACAGG TGAAGAGACCACTAAAAGCATCCAGGACCAGACAGCCATCCAGGACCAACCTTCCAGTTCT GTCTGTGAACGAGGACCTAATGCACTGCACAGCATTTGCAACGGCAGATGAGTATCATCTG GGAAATCTGTCTCAAGATCTGGCCTCCCACGGATATGTTGAAGTAACAAGCTTGCCTAGAGA TGCAGCAAATATTTTGGTGATGGGTGTGGAAAATTCTGCAAAAGAAGGTGATCCTGGAACAA TATTCTTCTCAGGGAAGGAGCTGCTGTGTTTTGGAATGTGAAAGACAAAACTATGAAGCAT GTGATGAAAGTTCTAGAAAAACATGAAATTCAGCCCTATGAAATCGCACTGGTACACTGGGA AAATGAAGAACTTAACTACATAAAAATAGAGGGACAGTCAAAACTTCACAGGGGGGAAATCA AGTTAAATTCAGAGCTGGATTTAGATGATGCCATTCTAGAGAAGTTTGCTTTCTCCAATGCTC TATGCCTTTCTGTAAAACTGGCAATTTGGGAAGCATCACTGGATAAATTTATTGAATCTATTCA GTCAATTCCTGAGGCTTTAAAAGCTGGGAAGAAGTGAAACTATCTCATGAAGAAGTTATGC AGAAAATCGGTGAACTCTTTGCTCTAAGGCACCGTATAAACTTGAGTTCAGACTTCCTGATTA CTCCTGATTTCTACTGGGACAGAGAAAACCTGGAAGGACTTTACGATAAAACGTGTCAATTC CTTAGCATTGGCCGAAGAGTTAAGGTCATGAATGAAAAACTTCAGCACTGCATGGAACTAAC AGATCTAATGCGGAATCACCTGAATGAGAAGAGGGCACTCCGCTTGGAGTGGATGATTGTC ATCCTCATTACCATAGAGGTAATGTTTGAGCTGGGACGAGTATTTTTCTGATCAAGTGATAAC CAAAGTGTCACTGCAAGAGATATTCAAGTTCTACAATCAAAAATTAAATGTTCGGCCCGGCG CGGTGCCTCATGCCTGTAATCCCAGCACTTTCGGAGGCCAAGAAGGGTGGCTTGAGATGAG ATCAGGAGCTCAAGACAAGCCTGGCCAACATGGTGAAACCCCATCTCTACTAAAAATACCAA AATTAGCCAGGTGTGTTGGCACACGCCCGTCATCTCAGCTACTCAGGAGGCTGAGGCAGGA GAATCTCTTGAACTTGGGAGGCGGAGGTTGCAGTGAGCTAAGATCACACCACTGCACTCCA NNNNNNNNNNNNN

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NCGCCTGTGGGAGGACGTCCGGGTGGGCGGACTCCTAGCGGACACCTCGTGGA GTCCGGCCGGAAGAGCAACCGAGATGAAGGTGAAGATGCTGAGCCGGAATCCGGACAATT ATGTCCGCGAAACCAAGTTGGACTTACAGAGAGTTCCAAGAAACTATGATCCTGCTTTACAT CCTTTTGAGGTCCCACGAGAATATATAAGAGCTTTAAATGCTACCAAACTGGAACGAGTATTT GCAAAACCATTCCTTGCTTCGCTGGATGGTCACCGTGATGGAGTCAATTGCTTGGCAAAGCA TCCAGAGAAGCTGGCTACTGTCCTTTCTGGGGCGTGTGATGGAGAGGTTAGAATTTGGAAT CTAACTCAGCGGAATTGTATCCGTACAATACAAGCACATGAAGGCTTTGTACGAGGAATATG TACTCGCTTTTGTGGGACTTCTTTTTCACTGTTGGTGATGACAAAACTGTGAAGCAGTGGAA GTGTATACTGGGATTGATCATCACTGGAAAGAAGCTGTTTTTGCCACATGTGGACAGCAAGT AGACATTTGGGATGAACAAAGAACTAATCCTATATGTTCAATGACCTGGGGATTTGACAGTAT AAGTAGTGTTAAATTTAACCCAATTGAGACATTTCTCTTGGGAAGTTGTGCATCTGACAGGAA TATAGTACTGTACGATATGAGGCAAGCTACTCCTTTGAAAAAGGTTATCTTAGATATGAGAAC AAATACAATCTGTTGGAACCCTATGGAAGCTTTCATTTTTACAGCAGCAAATGAAGATTATAA CTTATATACTTTTGATATGCGTGCACTGGACACTCCTGTAATGGTCCATATGGATCATGTATC TGCAGTGCTTGATGTGGATTACTCTCCCACTGGGAAGGAGTTTGTGTCTGCTAGTTTCGATA <u>AATCTATTCGAATCTTTCCTGTAGACAAAAGTCGAAGCAGGGAGGTATATCATACAAAGAGAA</u> TGCAACATGTTATCTGTGTAAAATGGACTTCTGACAGCAAGTATATTATGTGTGGATCTGATG AAATGAACATTCGCCTGTGGAAAGCTAATGCTTCTGAAAAATTGGGTGTGCTTACATCACGA GAAAAAGCAGCCAAGGATTATAACCAGAAATTGAAGGAGAAATTTCAGCATTATCCTCATATA CATCATGAAAGAAGCTCGTCGACGAAAGGAAGTGAATCGTATTAAACACAGCAAGCCTGGAT CTGTGCCACTTGTGTCAGAGAAGAAGAACACGTAGTGGCAGTTGTAAAATAATTGGTATTC CTAACAATCCTGATGTATAATTATTTGTTACTTTTGATTTGAGAACTCTACAAATAAAAGTGCT GGGACTAGATTAATTGCAAACATTTTAGTTATATGTGTAGAGCTTTATTGTTACTCCTTTTAGC TACCCTGAAAAATGATCCTTAAAGGTGGCCTAGTTGGTAAGACTGTTTTATCCTTAATCTGCA TTCTTCTTTCATTGTAGAATACAGTATTTGCAACTCATTTTTTCTTGTTTTTATTACAGATATAC TTACTTTCTCTTTGATCTATTATTGTAGACACTATACATTCAAATTGACATTTAAGACCAAACAT CTCTTATGTTATCTTTAATATTACTTTGAATAATGATTGCAATGATGTTTCTTCCTGTGATTCCA

#### Table 4

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NCGCCTGTGGGAGGACGTCCGGGTGGCCGAACTCCTAGCGGACACCTCGTGGA GTCCGGCCGGAAGAGCAACCGAGATGAAGGTGAAGATGCTGAGCCGGAATCCGGACAATT ATGTCCGCGAAACCAAGTTGGACTTACAGAGAGTTCCAAGAAACTATGATCCTGCTTTACAT CCTTTTGAGGTCCCACGAGAATATATAAGAGCTTTAAATGCTACCAAACTGGAACGAGTATTT GCAAAACCATTCCTTGCTTCGCTGGATGGTCACCGTGATGGAGTCAATTGCTTGGCAAAGCA TCCAGAGAAGCTGGCTACTGTCCTTTCTGGGGCGTGTGATGGAGAGGTTAGAATTTGGAAT CTAACTCAGCGGAATTGTATCCGTACAATACAAGCACATGAAGGCTTTGTACGAGGAATATG TACTCGCTTTTGTGGGACTTCTTTTTTCACTGTTGGTGATGACAAAACTGTGAAGCAGTGGAA GTGTATACTGGGATTGATCACTGGAAAGAAGCTGTTTTTGCCACATGTGGACAGCAAGT AGACATTTGGGATGAACAAAGAACTAATCCTATATGTTCAATGACCTGGGGATTTGACAGTAT AAGTAGTGTTAAATTTAACCCAATTGAGACATTTCTCTTGGGAAGTTGTGCATCTGACAGGAA TATAGTACTGTACGATATGAGGCAAGCTACTCCTTTGAAAAAGGTTATCTTAGATATGAGAAC AAATACAATCTGTTGGAACCCTATGGAAGCTTTCATTTTTACAGCAGCAAATGAAGATTATAA CTTATATACTTTTGATATGCGTGCACTGGACACTCCTGTAATGGTCCATATGGATCATGTATC TGCAGTGCTTGATGTGGATTACTCTCCCACTGGGAAGGAGTTTGTGTCTGCTAGTTTCGATA AATCTATTCGAATCTTTCCTGTAGACAAAAGTCGAAGCAGGGAGGTATATCATACAAAGAGAA TGCAACATGTTATCTGTGTAAAATGGACTTCTGACAGCAAGTATATTATGTGTGGATCTGATG AAATGAACATTCGCCTGTGGAAAGCTAATGCTTCTGAAAAATTGGGTGTGCTTACATCACGA GAAAAAGCAGCCAAGGATTATAACCAGAAATTGAAGGAGAAATTTCAGCATTATCCTCATATA CATCATGAAAGAAGCTCGTCGACGAAAGGAAGTGAATCGTATTAAACACAGCAAGCCTGGAT CTGTGCCACTTGTGTCAGAGAAGAAGAACACGTAGTGGCAGTTGTAAAATAATTGGTATTC CTAACAATCCTGATGTATAATTATTTGTTACTTTTGATTTGAGAACTCTACAAATAAAAGTGCT GGGACTAGATTAATTGCAAACATTTTAGTTATATGTGTAGAGCTTTATTGTTACTCCTTTTAGC TACCCTGAAAAATGATCCTTAAAGGTGGCCTAGTTGGTAAGACTGTTTTATCCTTAATCTGCA TTCTTCTTTCATTGTAGAATACAGTATTTGCAACTCATTTTTTCTTGTTTTTATTACAGATATAC TTACTTTCTCTTTGATCTATTATTGTAGACACTATACATTCAAATTGACATTTAAGACCAAACAT

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TTTTTTTTTTTTTTTTGGAGGAGATGGACAGTGTCAGTCTCCTGATAAGGGGGTGA TGGGTAGGTAATTTAAAAGCTTCTATTATAAAATCTAGTCTCTCTGACACTGCCCTGTCCACT GCAGTCACATCTCCCAATACTGAAGGATCCTGAGAATACGAGCGGGCATGACACTTACTCAC GTCATTCACCATNCTCGNNNNN

>66

GATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTGAAGGATAAGAAATTACTGTG TCAAATTACCCACAAGTTAAATGCCCATGTTCCAGACCTGTGGCTCTTAGTATCAGGCTTGTG ATAGAGAAAAGGCTGCTATGAATTCTACTCAGTGTGCTTAGACCAAAGGAAACCACCACAGG GATTTCACAGGC

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ATTTGACAGAGCTGTCCCTGGTGCGGAATTCCCTGACTGCACCAGTAAACCTTCCAGG CACAAACCTGAGGAAGCTTTATCTTCAAGATAACCACATCAATCGGGTGCCCCCAAATGCTT TTTCTTATCTAAGGCAGCTCTATCGACTGGATATGTCCAATAATAACCTAAGTAATTTACCTCA GGGTATCTTTGATGATTTGGACAATATAACACAACTGATTCTTCGCAACAATCCCTGGTATTG CGGGTGCAAGATGAAATGGGTACGTGACTGGTTACAATCACTACCTGTGAAGGTCAACGTG CGTGGGCTCATGTGCCAAGCCCCAGAAAAGGTTCGTGGGATGGCTATTAAGGATCTCAATG CAGAACTGTTTGATTGTAAGGACAGTGGGATTGTAAGCACCATTCAGATAACCACTGCAATA CCCAACACAGTGTATCCTGCCCAAGGACAGTGGCCAGCTCCAGTGACCAAACAGCCAGATA TTAAGAACCCCAAGCTCACTAAGGATCACCAAACCACAGGGAGTCCCTCAAGAAAAACAATT ACAATTACTGTGAAGTCTGTCACCTCTGATACCATTCATATCTCTTGGAAACTTGCTCTACCT ATGACTGCTTTGAGACTCAGCTGGCTTAAACTGGGCCATAGCCCGGCATTTGGATCTATAAC AGAAACAATTGTAACAGGGGAACGCAGTGAGTACTTGGTCACAGCCCTGGAGCCTGATTCA CCCTATAAAGTATGCATGGTTCCCATGGAAACCAGCAACCTCTACCTATTTGATGAAACTCCT GTTTGTATTGAGACTGAAACTGCACCCCTTCGAATGTACAACCCTACAACCACCCTCAATCG AGAGCAAGAAAAACCCCAATTTACCTTTGGCTGCCATCATTGGTGGGG CTGTGGCCCTGGTTACCATTGCCCTTCTTGCTTTAGTGTGTTGGTATGTTCATAGGAATGGAT CGCTCTTCTCAAGGAACTGTGCATATAGCAAAGGGAGGAGAAGAAAGGATGACTATGCAGA AGCTGGCACTAAGAAGGACAACTCTATCCTGGAAATCAGGGAAACTTCTTTTCAGATGTTAC CAATAAGCAATGAACCCATCTCGAAGGAGGAGTTTGTAATACACACCATATTTCCTCCTAATG GAATGAATCTGTACAAAAACAATCACAĞTGAAAGCAGTAGTAACCGAAGCTACAGAGACAGT GGTATTCCAGACTCAGATCACTCACACTCATGATGCTGAAGGACTCACAGCAGACTTGTGTT TTGGGTTTTTTAAACCTAAGGGAGGTGATGGTAGGAACCCTGTTCTACTGCAAAACACTGGA AAAAGAGACTGAAAAAAAGCAATGTACTGTACATTTGCCATATAATTTATATTTAAGAACTTTT TATTAAAAGTTTCAAATTTCAGGTTACTGCTGCGATTGATGTAGTGGAGATGCCTGAACACAA TTCTATATTITAGTATTTTTTAGTAATTTGTACTGTATTTTCCTTGCAAATATTGGAGTTATAAA CCATTTACTTTGTGTTCTACTGAGTAAGATGACTTGTTGACTGTGAAAGTGAATTTTCTTGCT GTGTCGAACAATCAGGACTGCATTCATATGAGATCCTTGTAGTATAAGCACAGGCCATTTTTC ACTTTGGTATTAATAAAATGTAAAAAAAAAAAAACTGGCTGAATGGCTGAATGAGATAAAATTTA ATTTTAAAAAAATGGTTATGAAATAATGTTCCAATTATTAAATTTGTATTATCCCAGTGGTATTC AATAAATCAAAATGTGTGAAGTAATGGGCAATATCAAACTTCCTGCATATCTCCATTTTTGCTC TAGGCAAATTAATTATCCTTAAAAAAAGTTAAGCATATCTTCTGAACTGAATACATCAGCTGGC ATAAAAGGAGCATGAAGTCTGTTAAAGCCATTGTCAGCAAAGCTTTGAAAAATAAAGGACTTCA CATTITCGGTAATGTAAATGTGCTTCCAAGTTGGGGGGAAAATGTGTACTTAGGAAAACATG GAAACTTAGACTTGTATAG

NNNNNNNNNNATTCTCAGGGCAGTCCCCGCTGTGTCCTCTGTTCTCCTTCAGTAAT ATAGTTCATCTGGATTCGCTCCAATCTAGTTTTAAACTAGCTTTGGTCTTCTCATCTTTTCGGT ACAACACTTTCAACTATTATACTTCTACTTTTTTTCTTGTACACTCAGATCCATGGCACCTCA TTTTTACACTGGAGTAAACATCAATATATGTTCCACAATCTGTTGAGAAGTTGCCTGAATGTT CCCTAATAGCTACTTGCCCCCTATTCTGAATATTCTGGTTTCTGAATATTCTGGTTCTTTTCT TTTCCGTATATTCTTCTAGTCGAAGAACCACTTGGTCCAGTACTGGGAACAGAGCTCGGCAT GCCATGAAATGTGGGTGGGCAGTTGATCCATCTTTGTAGGCCACCACAATTAAGCCACATTG AACCTGAAAGCTGTAGTTGGTATCATGGTTCATGGCACCCATGTATGCCACAACTTGCAGTG AGAGCTTGCCCTGATACTCAGCCACACAGTCCAGCAGACCTATATAGTTTAAGGTTTCATGT TGAACAGCACTTTCAAGAGCTCGCACTCCACTGACATCTTTCAGAATATGCTGGACACTTTCA ATGTAACCAGACTTGAGGAGATTTTCATCTCTCTTTTTAAGGTTTCCTGGGGTGAAAGTATG CTTTCCAAGGCTTCGTGGAACCGTTTCCCTTGTAAAAAGACGTTTGAAGTGTATTCTTTAAAG CCATCTTCTCCCAGTTCCAGAATCATCCGCTGTTTCCACCTCTCCAACAAGAAAACCTGTTGT TTTGTCATGGTCTGCTGAAGGACTCGGGTCACACTTGGTATCACATTCCTTTGCAAGGGGAT TTTCAAAGGAACTGAAGGATCACTTGCATTTGGTTTATCACTTCTCTCTGGATTGAAGATAGG GTCCACAGAGCAAAGCATCTTCCTCCACCGATCCCGGGGTCTGGGCGACGCCTCTGGATGA CAAGACAGACTGAACTAAATTAGAGTATTTTTCTTGGTCCACTTCTTCATATGGGTTCACTTTT TTCTTCCGGCCACATGAGTAAGAGGAAGTAGAGAAAGCCACAAGGGCAGCTGATTCCACAG 

#### Table 4

GTTTTCACTTTAGTCTATTTGCAACGGTCGAAGGCCTTTATGTTTGTATTCCTTGGAAGCCAC CACACTTCGCTTAACTCTCAAGGCGCGAACAACCTCTCGCGACCCGN >71

GATTGGAGCTCCCGCGGTGGCGGCCGAGGTACTTGAAGGATAAGAAATTACTGTG TCAAATTACCCACAAGTTAAATGCCCATGTTCCAGACCTGTGGCTCTTAGTATCAGGCTTGTG ATAGAGAAAAGGCTGCTATGAATTCTACTCAGTGTGCTTAGACCAAAGGAAACCACCACAGG GATTTCACAGGC

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NGGCGGCCGAGGTGCGCGGGGAGGCGTTGTGGGAGGAGGTGCGGGGAGAGAGG AAGGGGCCTGTGCACTGAGCAGCATCAAACATTAGTGGATGGCCTTGCGTCTCAATCTGC AGTAAAGAGGAAACTAATCTGAAAGGGAACGATAGGACTGTGTGTCTTTTTATTTTTTAAAAT ACGGAGTGTGCAATTTTACTGAATCTTGAATCATGCCCAAAAGAATGAGCTGTCGGTGCTGC AGTCGTGACCCAGGCTGN

cACGCGTCCGCCCacqcqTCCGGTCCTTCAqaCTGCCCGGAGAGCGCGCTCTGCCTG CCGCCTGCCTGCCACTGAGGGTTCCCAGCACCATGAGGGCCTGGATCTTCTTCTCC AGGTGGTGGAAGAACTGTGGCAGAGGTGACTGAGGTATCTGTGGGAGCTAATCCTGTCCA GGTGGAAGTAGGAGAATTTGATGATGGTGCAGAGGAAACCGAAGAGGGGGGTGGTGGCGGA AAATCCCTGCCAGAACCACCACTGCAAACACGACAAGGATCTTGTGATCTAAATCCACTCCT TCCACAGTACCGGATTCTCTTTAACCCTCCCTTCGTGTTTCCCCCAATGTTTAAAATGTT TGGATGGTTTGTTCTGCCTGGAGACAAGGTGCTAACATAGATTTAAGTGAATACATTAAC GGTGCTAAAAATGAAAATTCTAACCCAAGACATGACATTCTTAGCTGTAACTTAACTATTAAG GCCTTTTCCACACGCATTAATAGTCCCATTTTTCTCTTGCCATTTGTAGCTTTGCCCATTGTCT TATTGGCACATGGGTGGACACGGATCTGCTGGGCTCTGCCTTAAACACACATTGCAGCTTCA ACTITICTCTTTAGTGTTCTGTTTGAAACTAATACTTACCGAGTCAGACTTTGTGTTCATTTCA TTTCAGGGTCTTGGCTGCCTGTGGGCTTCCCCAGGTGGCCTGGAGGTGGCCAAAGGGAAG TAACAGACACGCATGTTGTCAAGGATGGTTTTGGGACTAGAGGCTCAGTGGTGGGAGAGA TCCCTGCAGAACCCAACCAGAACGTGGTTTGCCTGAGGCTGTAACTGAGAGAAAGATT CTGGGGCTGTCTTATGAAAATATAGACATTCTCACATAAGCCCAGTTCATCACCATTTCCTCC TTTACCTTTCAGTGCAGTTTCTTTTCACATTAGGCTGTTGGTTCAAACTTTTGGGAGCACGGA CTGTCAGTTCTCTGGGAAGTGGTCAGCGCATCCTGCAGGGCTTCTCCTCTCTGTCTTTTGG AGAACCAGGGCTCTTCTCAGGGGCTCTAGGGACTGCCAGGCTGTTTCAGCCAGGAAGGCC AAAATCAAGAGTGAGATGTAGAAAGTTGTAAAATAGAAAAAGTGGAGTTGGTGAATCGGTTG TTCTTTCCTCACATTTGGATGATTGTCATAAGGTTTTTAGCATGTTCCTCCTTTTCTTCACCCT CCCCTTTTTCTCTATTAATCAAGAGAAACTTCAAAGTTAATGGGATGGTCGGATCTCACAG GCTGAGAACTCGTTCACCTCCAAGCATTTCATGAAAAAGCTGCTTCTTATTAATCATACAAAC TCTCACCATGATGTGAAGAGTTTCACAAATCTTTCAAAATAAAAAGTAATGACTTAGAAACTG CCTTCCTGGGTGATTTGCATGTGTCTTAGTCTTAGTCACCTTATTATCCTGACACAAAAACAC ATAAGCATACATGTCTACACATGACTACACAAATGCAAACCTTTGCAAACACATTATTATGCTT

TTGCACACACACCTGTACACACACCCGGCATGTTTATACACAGGGAGTGTATGGTTCCT GTAAGCACTAAGTTAGC >77

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NNNNNNCCGAGGTTCCTTGTTGCAGCTCTTTATTTCTTAGTCCCACTCCCCGAGG
TAACACATTTCTGCTTTTTAGCTGTTTCCTCTAGTGTAGGTTCACCTTTCTAATTTTTGATTCA
ATCACTTAACCACCGTTACATACTACAAAAATATCACTATATTATGACCATGATTATATTTCTTTT
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TGCAGCTAAGAGCTTCATTCCTCATCATCCTGGGGTTCCTTTCCCTCTCTTTGGGCTGGAA
TCCCTCTTGCCTGGATCTCTCACCTTCATAAATCTAGTTTACTCCTTTGTTTTN
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## Table 4

CTCACATTAAGACAGTAGCAATTCCAGCCTTGAGCTCTGGGATTTTTCAGTTCCCTCTGAATTTGTGTACAAAGACTATTGTAGAGACN

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ACCGCTCAGCCTGCTTGGTTGCATCCTCCGCATGGCGAGTCAGCTCTGAGATCTGA
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GATGCCAAATGTGCTTTCTCCTTGTCTTTTCTCTCCATGCACCGTTTCACTTCCTCTAACTCA
GATGCCATTGCGCTGAAGTTCAGCTGCACTCTCAAATCTGACATTTGCTTCTCCAGGTCCTG
TTTTTCCCGCTCAACCCCTCTCCTAAATCTCCAGTCCTCCCCTTGTTCATCCTGATAGTTTGA
CTGTTGCTTGGAAATCTGAGATACTTGATGCTGTAAACCCTTTCGATCACCTTCTGCTTTCGT
AAGTTGTGT

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CGGTCCTGGGGTAGAGTTTGCAAGCTTTCTGACTAGGCTAGTCGAGTAACTATTCGGGTCAT GGCGTCAAACTCAACTAAGTCTTTCCTGGCAGATGCCGGCTATGGCGAACAGGAACTGGAT GCCAACTCTGCCCTTATGGAATTGGACAAAGGCCTAAGATCTGGCAAACTTGGTGAACAGTG TGAAGCAGTTGTTCGCTTTCCCAGACTTTTTCAGAAGTATCCATTCCCTATTCTTATCAATTCT GCATTCCTAAAGTTAGCTGATGTTTTCAGAGTTGGAAATAATTTCCTGAGGCTATGTGTTCTT AAAGTTACCCAACAAAGTGAGAAACATTTGGAGAAGATTCTAAATGTGGATGAATTTGTGAAG AGAATTTTTTCTGTGATTCATAGTAATGATCCTGTGGCAAGAGCCATCACCCTCCGGATGTTG GGAAGTCTGGCATCAATAATTCCTGAGAGGAAGAATGCTCATCATAGTATTCGTCAGAGTTT AGATTCACATGATAATGTAGAAGTTGAAGCTGCTGTTTTTGCTGCTGCAAACTTCTCTGCACA GTCAAAGGATTTTGCTGTAGGAATCTGTAACAAAATCAGTGAAATGATTCAAGGTTTAGCGAC ACCAGTAGACTTGAAGCTAAAATTGATACCCATTCTACAGCACATGCACCATGATGCAATCTT GGCTTCCAGTGCTCGTCAGCTTTTACAACAGCTGGTCACATCCTATCCGTCCACCAAAATGG TGATTGTGTCTTTGCACACTTTCACTCTGCTTGCAGCGTCATCTTTGGTTGATACACCTAAGC AGATTCAGCTTCTGTTGCAGTATTTGAAGAATGATCCCAGGAAGGCAGTAAAGAGACTTGCT ATTCAAGATCTGAAATTACTTGCTAATAAAACACCCACATACTTGGAGTAGGGAGAATATTCAG

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#### Table 4

GCACTTTGTGAGTGTGCCCTCCAGACTCCTTATGACAGCTTAAAACTAGGGATGTTGTCTGT CCTTTCCACACTATCAGGGACCATCGCCATCAAACATTACTTCAGTATAGTTCCAGGAAATGT GAGTTCTTCTCCCAGATCTTCTGATTTAGTCAAATTAGCCCAAGAGTGCTGTTACCATAATAA CAGGGGCATTGCAGCTCATGGAGTTAGAGTCCTAACTAATATAACTGTTTCTTGTCAAGAAAA GGATCTTTTGGCACTGGAACAAGATGCTGTCTTTGGCCTGGAATCCCTACTGGTACTTTGTA GTCAAGATGATAGTCCAGGTGCTCAGGCCACTTTAAAGATTGCTCTAAACTGTATGGTGAAG TTGGCCAAGGGCAGGCCCCATCTTAGCCAGTCAGTAGTTGAGACCTTGTTGACTCAATTGCA CAGTGCTCAAGACGCTGCCCGGATTTTGATGTGCCATTGCCTGGCAGCCATTGCCATGCAA CTGCCGGTGCTGGTGATGGGATGCTTGGTGACCTCATGGAGCTGTACAAGGTGATTGGAC GATCAGCCACAGACAAGCAACAAGAACTTCTGGTGAGTTTGGCTACTGTGATTTTTGTTGCA AGTCAGAAGGCATTGTCTGTGGAAAGTAAGGCAGTAATTAAGCAGCAGCTTGAAAGTGTCTC CAATGGATGGACTGTATACCGTATTGCCAGACAGGCTTCCAGAATGGGTAATCATGACATGG CCAAAGAGCTTTATCAGAGTTTGCTGACTCAGGTTGCCTCAGAACATTTCTACTTCTGGCTAA ATAGTTTGAAGGAGTTTTCACATGCAGAACAGTGTCTCACTGGGTTGCAAGAGGAAAATTAT AGTTCAGCACTTTCTTGCATTGCTGAATCTTTAAAATTCTATCACAAAGGGATTGCTTCCTTAA CAGCAGCTAGTACACCACTGAATCCTTTAAGCTTTCAGTGTGAATTTGTAAAACTCAGGATTG ACCTTTTACAAGCCTTCTCTCAACTTATCTGTACTTGTAATAGCCTGAAGACAAGCCCACCAC CTGCAATTGCCACAACAATTGCCATGACCTTAGGAAATGACCTCCAGAGGTGTGGTCGCATC TCCAATCAGATGAAACAGTCCATGGAAGAATTTCGAAGCCTTGCTTCTCGATATGGAGATCTT TACCAGGCATCTTTTGATGCTGACTCAGCAACTTTGAGGAATGTTGAACTACAGCAGCAGAG CTGTTTACTGATATCTCATGCAATAGAAGCCCTGATTTTGGATCCAGAATCAGCAAGTTTCCA GGAATATGGATCTACTGGAACAGCCCATGCTGATAGTGAATATGAAAGAAGAATGATGTCTG TATATAATCATGTCTTGGAGGAGGTAGAATCACTCAATCGGAAATATACCCCTGTTTCTTATA GATATTTTTCCAGAAACTACAGTCTACCAGCATCAAGCTTGCTCTGTCACCATCGCCCCGG AATCCTGCAGAGCCCATTGCTGTCCAGAATAACCAGCAGCTGGCGCTAAAGGTAGAGGGAG CTTCCACACTGCAGAGTAAATCTGGACAAGACTACAAGATACCCATTGACAACATGACCAAT GAGATGGAGCAAAGGGTTGAACCTCATAATGATTACTTCAGTACTCAATTTCTGTTGAACTTT GCTATCCTTGGAACACACACACTTACAGTGGAATCTTCTGTGAAAGATGCCAATGGTATAGTA TGGAAGACTGGTCCCAGAACTACCATATTTGTAAAATCCCTGGAAGACCCTTATTCCCAGCA **AATTCGCTTACAACAGCAGCAAGCCCAGCAGCAGCATTACAGCAGCAGCAGCAACGCAATGCC** CAGAAACAGTTTGGTTTTTCATATGGAATAAGTATTAAAGTTACAGTGTAGTTCATTTATTCAT TGATTTTTGTAATGTAATATTCTGGAAAAAATTTTGTTTTCTTAAAAATTTTGTCTGACAGCTGG GCGTGGTTGCTCACGCCTGTAATCCCAGCACTTTGGGAGGCTGAGGTGGGCGGCTCACGA GGAGATCAAGACCATCCTGGCTAACACAGTGAAACCCCGTCTCCACTAAAAAAATACAAAAAA ATTAGCCAAGCATGGTGGCAGGCGCCTGTAGTCCCAGCTACTTGGGAGGCTGAGGCAGGA GAATGGTGTGAACCTGGGAGGCGGAGCTTGCAGTGAGCCGAGACTGTGCTCCAGCCTGGG CGACAGAGCGAGACTCCGTCTCAAAAAAATAAATAAATACATTTTGTCTGAAAAAATAACTGGA AAAAAAAAAA

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# Table 4

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NNCTCCCGCGGTGGCGGCCGAGGTACCAGCAGAGATGGCTTCAAGATGATTTAG
GACTTGGGTCAGTAGCACTTACTGATGTAGTGGTTTGATACACACTGATTACCTTCTTT
TTTATTCTCTGGCATTTCTCCTATATAACTAGCCACTTTTAAACAATATTTGTCGGCTCTTTTCT
TCTGCTTGTCTGTAAATATTAGGGTTCCTGAGTCCTTACCTAGATTTTCTTCTCTTCTTACTCC
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GCCTCACTTGGATGCTCTGCAGGCCTAAATAACCTTTGCGGACAGATTAACAGGGAAAAAAT
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>99
>100

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ACCATAATAATGCAATTAACAAAATCCAGGATTTAAGGATTTCTATAAGATTAAAAAAA AAATGAGGTGGTGTCGAGTGGGGAGAGAAAAAAGCAGGAAACAAAACTGGTGAGAGGAAAT GACCCCTGATGAAAGATCTTAAACACCAGGCTGAAGATTTTAGATTTCTACCTATTAGAAAT GAATATTCACTGAGGTTTGATGAAGAGTCACTGAAGTGTCACAAAGAAAACAAGATTTGAGA AAGATTCTTGAGAACTCGTGCATAGGAATGAACTGCAATAAGGGCAGATTAGAGAAGAACTA AGGATGATGACCAATTAGAGATCAGCGCCAAGGAGACAGAGAAGTCAAGATGATGTTGAAAT GTCCTGCCTGGGTAACTGGGAGAAAATGGTACTGTCTGGACCCAAAATAAGAATTAGTGA CTTCTTTTCCAGAGGGTACTAAGGCAGGTCCTGGTTTAGAGCCATATGGAATAATTAAAAAAT CCTGTAAGATAACCCACGATCAACACACACTTCAAATAAAAACCACTTTAGCAGCAGACCCAT CTGTCCTGGGCCACTTGGCCCCGCTAGACCTTGCTGATAGAGAACACCAACTCATCTCTCA AAGATGAATCAGACACAGTTCTAGCCTTTGATAAGCTTAATTCTACCTTCTTTCCCTATCAATG **AGCTGTTACCTATGAACAGGTAGCTAAAGTGCTTCAGAGATATGAGTCCCTGATACCA GTTCCTAACTGCCACGTATGGCACATGAACACCTTCAACACTTCAGTCTATCCTTGGCAGAG ATAN** >103

#### Table 4

CAAGGGTTATTTTCTAAAAGACATTGGTTCCCATCGCTCCTCTGACTAAAGGTCCTACTATG GCACATTTGCCCTTGGCACTCAAGGACCTTGCAATCAGGCTGAGAACCTCATGTTCTCAAAC TCAAGACCANN

>104 >105

ACTITCTAGGTATATCATGTGCCCTAATGTGCTCCTAATATCATAAATGTTTACTTTCC GAAAAGTATTTCTGAAAGGGAGCATATTTTGGAAAGTGCATAGGCTTGTAATCATACTTGTTT TCAAGTTCAACTTTGCTATTCAACTAGAATAATCTTGTGCAAAACCTGAGCTGATTTTCTCAT CTATAAAATGGAAACAATACTTTCTGTGATAATGGGTGCAAAACACAAGGTATACTGGTTTCT TTGCTCTGGATTCAAGTTTTCTTAGTTTCAAAATTTTAAAGGGAAACCAAAAATGTTTCAT GGGAC

>106
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>107

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>108

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>111

# Table 4

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>112

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AGGCTTTCCAGATGCTGGACGTTGACTGTGGTGAATACGTTGATGCCGGCAGAGAGCAATT
CCTGAATGTCTTGCCAGCGCTTTTCGTGGCGGCTGCCGGGGGCGTTGCTGTGGGCCAGTT
CGTCCACCAGCACCAGGTTGGCTTGCCGGCGAGCANNNN
>113

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GTTGGTGAGGAAAGGACAGAGTGGGTGAGTAAGCAGACAGGGAGGTAAGAGTGACTCTCT GGCTTTCTCCTCTTCAGAGAGCAGCTCAATCAACTGAGTCGCAGATCTCCTCCACC ACAGCATTGAAGATGTGTGGCTGGTCAGCATAGACATGGTGGGAGGCACCCTTAATCTCCA CAGGTGTCGGACCCGTAGATCATAGTGATAGGCACATCTTTTCGAATCAAGTGAATTCGCTC CAGCATAGGGCGCCGGGCCCAGCCAAAGGACTCCATCATGGCTTTGAATGCTGTCTCACCA CTGGGATTCTGTGCGTTGCAGTGGTAAATATACTCTGATATGGTATCATCTTCAAAGAAGTCT GCAAACTTGCGTTTGAAGTCCGGCCGGAATCGCTGCACCAGACCAGGCCCCCAGGGCCCA GCTACTCGAAGAACAGCCAATGGATTGGAACGTCCTAGGACAGATGCCACGGCTTTGACCC AGGCTGGGGGTGCACGGATCTCACTGGGGTTAGTTGGTCGGAGGGGAAAGCCCCATGGGT CCTCCCAAACTGTGCCCCAGGAGGATCATGCTGGGGATCCCCATGGTCTCCCGCCATGTCT CTATCGATGTCACAAACTCATCCTCAGCCCCCTCCGGGTCCCTTGGGAATGCTGGCCTTGA GCTTCGCCCGAAGCCAAGCAGATCGAAGGTGTGCAGTGTGCGGCGGGCACTCAGTGAGTC CATGTTGAGGATCCAGAGACCCACGCCCCCCAAAACCATGCACCATCACCAAGGGGGTG CATATCTGGCCAGGAACTTATTCTGGAGACACTGGAGGATCCTGGCTTCCACATTCTTCAGC CCCTTCTGTCGTCTTCTCGCAGCCGTAGTCGACGCGGCCGCGAANN >116

CCGCGGTGGCGGCCGGTAGCGCCGGTGTGGACCAGGGGCTCGTCGGT GGCGCCAGCGAATTGGTGACGACGCTGATCTTCACGTTGCGCCCGCGGATCTCGCGCAT CACCTCCAGCCCCGTGGCACCCGGGAATCAGGTAGGGCGAGACGATGGTCACTTCGGAACG CGCGCGGCGCATCTGCTCGACCACGTTGTAGCGCACGCTGTCGACATCCAGCAGCGCAC GCCGCCGTACGACGCGGTCTTGCCGATCACGCGGTCAGGCGAATCGGCATACGCCTCGGC GGTGGTCCAGATCAGGCCGAGCTTGCCGGCGTTTGAGGTCTTCGACCATCGGGCTGTAGC CGAN

>117

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GAAACAGGAAACGANN

>118

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#### Table 4

NNNNNNNNNNCGGAAGTCTTCTAGAATTAATTAACGCGGGGTAGCGGACTACGC TCTTCCAGCTGTCGGACCTGGGAAATTCTCCTGTGCTAAATCCCGTGGCGCTCGCGGGTGT CGCCGCGGTGCATCCTGGGAGTTGTAGTTTTTTCTACTCAGAGGGAGAATAGCTCCAGACG GGAGCAGGACGCTGAGAGAACTACATGCAGGAGGCGGGGTCCAGGGCGAGGGATCTACG CAGCTTGCGGTGGCGAAGGCGGCTTTAGTGGCAGCATGAAGCGCACCCCGACTGCCGAGG AACGAGAGCGCGAAGCTAAGAAACTGAGGCTTCTTGAAGAGCTTGAAGACACTTGGCTCCC TTATCTGACCCCAAAGATGATGAATTCTATCAGCAGTGGCAGCTGAAATATCCTAAACTAAT TCTCCGAGAAGCCAGCAGTGTATCTGAGGAGCTCCATAAAGAGGTTCAAGAAGCCTTTCTCA CACTGCACAAGCATGGCTGCTTATTTCGGGACCTGGTTAGGATCCAAGGCAAAGATCTGCTC ACTCCGGTATCTCGCATCCTCATTGGTAATCCAGGCTGCACCTACAAGTACCTGAACACCAG GCTCTTTACGGTCCCCTGGCCAGTGAAAGGGTCTAATATAAAACACACCGAGGCTGAAATAG CCGCTGCTTGTGAGACCTTCCTCAAGCTCAATGACTACCTGCAGATAGAAACCATCCAGGCT TTGGAAGAACTTGCTGCCAAAGAGAAGGCTAATGAGGATGCTGTGCCATTGTGTATGTCTGC AGATTTCCCCAGGGTTGGGATGGGTTCATCCTACAACGGACAAGATGAAGTGGACATTAAGA GCAGAGCAGCATACAACGTAACTTTGCTGAATTTCATGGATCCTCAGAAAATGCCATACCTG AAAGAGGAACCTTATTTTGGCATGGGGAAAATGGCAGTGAGCTGGCATCATGATGAAAATCT GGTGGACAGGTCAGCGGTGGCAGTGT

>120

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>123

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>124 >125

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NNNACTGAAAATGAGGTGAAAAAACAAGAAAGCTGAGAGAAATCAACATGTTCCCAA GTGCTGTATGTGAACAATAAATCTGAGACATACCTCTAAGGCTTTTCCAGAGACAAGAAAGC TCTCAACCTGTAAAGAATTCCTGGGACATGACTGAGAGCAATGAGAACTCCCAGTGGTCCAG AAGGTTAGCAGATATAGTGTAGAGCATACACAGATATACTATAGTTCATAACACTGGTGGCTT AGCTGTAAATCACAAAATAGCACTGGAATTATACTAGTGATCATAGCACATAGTCCAAGAAGA AAAAATTTTGATCTTGTTCTTAAACTTTGTGGAGCCAGTGGTGAAATGAGTCACACAAAGATG CAACAATGATTGAACCCAGCCCTCTTTAGACTAACATATTCTTGCCCATCACCACCAATATTA CAATAAAAATCAAGACACATGAAGGAGCATACCTTTTTCTGAAAGTAAATATTGCTTACCTCA GTCTCTATTGTTATTTGATGCAAAACACCCAGCATGCAATTTGAATCAATAAGACATGGAAAG GAGCAAAAATGTAACTCATGCTAAAGAAAAAAAAAAGAGTGAGAAAGAGACAACAAAAGCAGA TCCAGAAATGGTTAAACTTGTGGCATTATAAGGGAGGAGCTTTAAAATAACAATTATATAAAT ATAGAAACATCTAGTGGAAATGGTGATCAGTATTTATCAAGTTATGGGAATTTGCAGCAGAGA CGTAAAAATGCTATTATTTTACAATTCCATATTTTAATATAAAAAGAGTATGTTAAAAAATAAAAT TGGTAAAAACAAAATGTATCAAAAATTAAGATTTATGTAGATAGTCTTAACAGTAGAATAAATT NNNNNNNNN

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NNNAACTCAGACAGGCAGATAAAGAGAGATCAAAGAGATGAGCATGAGATACAGTC CCCTCGTGCCCAAGGAGACAGGGTGGTTACAGACATGGAAAATCTGAGAATAATCACCTCT GATAAAGATCACAGAAGCTGCCCGGGAGGTGTTTGGTAAGCTTGGAGTTACGTTTGTGGGG TGGATGGCAGAAGTCAGATTTCATAGCACTGAGGATGCAGCACAAGGAGAAGTTCAAGAT CAATTCCTAAGACAACAACTTGGCACTAAAAAACATAAACTATGTTCTGAAGGCTTTACCCTG ATGGTTTGGCTTCTACTCCAAAGCCACTTATTTGTGCATTCTACANAAAGTTTCTTGTCCTTTN TGAAATAAAGCTCTTATCCTAAGCTCCATTCACACCTGCGTGATAATGAACCAGCTAGTACTT ACTGTACTCAGGAAGCATGCAAAGTTCTGAATCTTAGAACAGAAAGTGAAAGCAAAAGTAAA TTCCCCTTCAGTCAAATCTCGTCCGGCATGATTTAAGATTAAATTCATGTATTGAAAATATTGT TCAGACCCCATGTGACATAACTGGAGCCAGTGCAGTGCCATGAAGAACTACGAGATTAGCC TGGATATTAACTTGTCTTCTAGAGAATAGATTTCATGTTCCATTCTTCTGCAATGGTTAATTCA CACAGAAAACCAATGTTTAACATTCACAGAGGATTTTACTGCTTAACAGCCATCTTGCCCCAA ATATGCATTTGTTCTCAGTTCTCAGTGCCATCTAGTTATCACTTCACTGAGGATCCTGGGGGCT TTCCCAGTAGCCACTAATGGGGAACGATTTCCTTGGCAGGAGCTAAGGCTCCCCAGTGTGG TCATTCCTCTCCATTATGACCTCTTTGTCCACCCCAATCTCACCTCTCTGGACTTTGTTGCAT CTGAGAAGATCGAAGTCTTGGTCAGCAATGCTACCCAGTTTATCATCTTGCACAGCAAAGAT CTTGAAATCACGAATGCCACCCTTCAGTCAGAGGAAGATTCAAGATACATGAAACCAGGAAA AGAACTGAAAGTTTTGAGTTACCCTGCTCATGAACAAATTGCACTGCTGGTTCCAGAGAAAC TTACGCCTCACCTGAAATACTATGTGGCTATGGACTTCCAAGCCAAGTTAGGTGATGGCTTT

### Table 4

GAAGGGTTTTATAAAAGCACATACAGAACTCTTGGTGGTGAAACAAGAATTCTTGCAGTAACA GATTTTGAGCCAACCCAGGCACGCATGGCTTTCCCTTGCTTTGATGAACCGTTGTTCAAAGC CAACTTTTCAATCAAGATACGAAGAGAGAGAGCAGGCATATTGCACTATCCAACATGCCAAAGG TTAAGACAATTGAACTTGAAGGAGGTCTTTTGGAAGATCACTTTGAAAACTACTGTAAAAATGA GTACATACCTTGTAGCCTACATAGTTTGTGATTTCCACTCTCTGAGTGGCTTCACTTCATCAG GGGTCAAGGTGTCCATCTATGCATCCCCAGACAAACGGAATCAAACACATTATGCTTTGCAG GCATCACTGAAGCTACTTGATTTTTATGAAAAGTACTTTGATATCTACTATCCACTCTCCAAAC TGGATTTAATTGCTATTCCTGACTTTGCACCTGGAGCCATGGAAAATTGGGGCCTCATTACAT ATAGGGAGACGTCACTGCTTTTTGACCCCAAGACCTCTTCTGCTTCCGATAAACTGTGGGTC ACCAGAGTCATAGCCCATGAACTGGCGCACCAGTGGTTTGGCAACCTGGTCACAATGGAAT GGTGGAATGATATTTGGCTTAAGGAGGGTTTTGCAAAATACATGGAACTTATCGCTGTTAATG CTACATATCCAGAGCTGCAATTTGATGACTATTTTTTGAATGTGTTTTTGAAGTAATTACAAA AGATTCATTGAATTCATCCCGCCCTATCTCCAAACCAGCGGAAACCCCGACTCAAATACAGG AAATGTTTGATGAAGTTTCCTATAACAAGGGAGCTTGTATTTTGAATATGCTCAAGGATTTTCT GGGTGAGGAGAAATTCCAGAAAGGAATAATTCAGTACTTAAAGAAGTTCAGCTATAGAAATG CTAAGAATGATGACTTGTGGAGCAGTCTGTCAAATAGTTGTTTAGAAAGTGATTTTACATCTG GTGGAGTTTGTCATTCGGATCCCAAGATGACAAGTAACATGCTCGCCTTTCTGGGGGAAAAT GCAGAGGTCAAAGAGATGATGACTACATGGACTCTCCAGAAAGGAATCCCCCTGCTGGTGG TTAAACAAGACGGGTGTTCACTCCGACTGCAACAGGAGCGCTTCCTCCAGGGGGGTTTTCCA GGAAGACCCTGAATGGAGGGCCCTGCAGGAGAGGTACCTGTGGCATATCCCATTGACCTAC TCCACGAGTTCTTCTAATGTGATCCACAGACACATTCTAAAATCAAAGACAGATACTCTGGAT CTACCTGAAAAGACCAGTTGGGTGAAATTTAATGTGGACTCAAATGGTTACTACATCGTTCAC TATGAGGGTCATGGATGGGACCAACTCATTACACAGCTGAATCAGAACCACACACTTCTCAG ACCTAAGGACAGAGTAGGTCTGATTCATGATGTTTCAGCTAGTTGGTGCAGGGAGACTGA CCCTAGACAAAGCTCTTGACATGACTTACTACCTCCAACATGAAACAAGCAGCCCCGCACTT CTCGAAGGTCTGAGTTACTTGGAATCGTTTTACCACATGATGGACAGAAGGAATATTTCAGAT ATCTCTGAAAACCTCAAGCGTTACCTTCTTCAGTATTTTAAGCCAGTGATTGACAGGCAAAGC TGGAGTGACAAGGGCTCAGTCTGGGACAGGATGCTCCGCTCGGCTCTCTTGAAGCTGGCCT TCCAGTGGAAAATTAAATATACCAACAGATGTTTTAAAGATTGTGTATTCTGTGGGTGCTCAG ACAACAGCAGGATGGAATTACCTTTTAGAGCAATATGAACTGTCAATGTCAAGTGCTGAACA AAACAAAATTCTGTATGCTTTGTCAACGAGCAAGCATCAGGAAAAGTTACTGAAGTTAATTGA ACTAGGAATGGAAGGAAAGGTTATCAAGACACAGAACTTGGCAGCTCTCCTTCATGCGATTG CCAGACGTCCAAAGGGGCAGCAACTAGCATGGGATTTTGTAAGAGAAAATTGGACCCATCTT CTGAAAAAATTTGACTTGGGCTCATATGACATAAGGATGATCATCTCTGGCACAACAGCTCA CTTTTCTTCCAAGGATAAGTTGCAAGAGGTGAAACTATTTTTTGAATCTCTTGAGGCTCAAGG **ATCACATCTGGATATTTTTCAAACTGTTCTGGAAACGATAACCAAAAATATAAAATGGCTGGA** GAAGAATCTTCCGACTCTGAGGACTTGGCTAATGGTTAATACTTAACTCGAGGCATGGTCAA TAGAAAAAGTAGGCTGGGCGCGGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGCTGA GAAGGCCGATCACGAGGTCAGGAGATGGAGACCATCCTGGCTAACACGGTGAGACCCCG TCTCCGCTAAAAATACAAAAATTAGCCGGGCATGGTGGCAGGTGCCTGTAGTCCCAGCTAC TCGGCAGGCTGCAGCAGGAAAATGGCATAAACCCGGGAGGTGGAGCTTGCAGTGAGCCGA >136

CGCGGTGGCGGCGAGGTACTTAAAAGTATATCAGGGCAGTTTCATGCCAGGGAG CCAGGGAAGGCACCCAAGGAAGTGATGGAAGAGTAGAAGTTCACCAGGTGCAGCTCAGGA AAGGGCTCAGCAAATTTCTCTGTAACAGGATGCAGACCCCGCGT >137

GGAGTCGACGTGTTTTGTGGGTGAAATGGCTGCCAGGTCGAGCGGTGCGCGT AGTACGGGCGGTGGCGCCAGGAGGAGCCGGACAAAGAGGGGAAAGCCTCATG CTGGGGTCTCCCCGCGGGGAGTTAAACGGCAGCGCCGATCTAGCAGTGGGGGGTCTCAGG AGAAGCGGGGGCCGCCAGCAGGAGCCCCCTCTCGCTCCCCCTCACCGGCGCGTCGC AGCCGCAACATCCTGGGCCGCTGCCGCCAACGAATGCAGCCCCAACTGTCCCAGGCCCT GTTGAGCCTCTTCTCCTGCCGCCTCCGCCGCCACCTTCACCTTCACCTTCTCGCCTCTGACGG

TGAGCGCGGCCGGGCCCAAGCATAAGGGCCACAAGGAGCGCCACAAGCACCATCACCACC GCGGCCCGATGGTGATCCCAGCTCCTGCGGAACCGATCTCAAGCACAAGGACAAGCAGG AAAACGGCGAGAGGACTGGAGGGGTGCCTCTGATCAAAGCCCCCAAGAGAGAAACACCAG ATGAAAATGGTAAAACCCAGAGAGCCGATGATTTTGTCTTGAAGAAAATAAAGAAGAAAAAG AAAAAGAAACACCGAGAAGACATGCGAGGAAGACGCCTTAAAATGTACAATAAGGAAGTACA GCACTTCAGGACTTAATAAGGAGTCCTTCAGGTATCTGAAAGATGAACAGCTGTGCCGATTA AATTTGGGTATGCAAGAATATCGGGTACCCCAGGGAGTACAAACACCTTTTATGACTCACCA GGAACATTCTATTCGTAGAAATTTCTTAAAAACAGGTACTAAATTTAGCAACTTTATTCATGAG GAACACCAGTCCAATGGTGGTGCTCTTGTCCTTCATGCTTACATGGATGAACTCTCATTTTTG TCTCCAATGGAGATGGAGAGATTTTCTGAGGAGTTTCTTGCTTTGACATTCAGTGAAAATGAG AAAAATGCTGCTTACTATGCTTTAGCAATAGTGCATGGAGCGGCTGCTTATCTCCCAGACTT CTTGGACTACTTTGCTTTTAATTTCCCCAACACTCCAGTGAAAATGGAAATTCTGGGCAAGAA AGATATTGAAACAACCACCATTTCAAATTTTCACACTCAGGTCAACAGGACATACTGCTGTGG CACCTACCGAGCAGGTCCTATGCGGCAGATAAGTCTCGTTGGAGCAGTAGATGAAGAAGTT GGTGATTATTTCCCAGAGTTCCTTGATATGTTAGAAGAATCACCATTTCTGAAAATGACTTTG CCCTGGGGTACACTTTCTAGCCTCCGACTCCAGTGTAGGTCCCAGAGTGATGATGGGCCTA TAATGTGGGTAAGGCCAGGAGAACAGATGATCCCTACAGCAGATATGCCAAAGTCACCCTTC CCGCGAAGTTCTCTTTGAAGATAGGACTAGAGCTCATGCTGATCATGTCGGTCAGGGGTTTG ACTGGCAGAGTACGGCTGCTGTTGGAGTTTTGAAAGCTGTACAATTTGGTGAATGGAGTGAC CAACCTCGCATAACCAAAGATGTGATTTGTTTTCATGCTGAGGATTTTACTGATGTTGTACAA AGACTTCAGTTAGATCTTCATGAACCTCCAGTTTCCCAGTGCGTACAGTGGGTAGATGAAGC TAAACTAAACCAAATGAGGCGGGAAGGCATTCGTTATGCTAGAATTCAGCTTTGCGACAATG ATATCTACTTCATCCCTAGAAATGTCATTCATCAGTTCAAAACAGTTTCGGCGGTGTGCAGCT TAGCCTGGCATATAAGGCTTAAACAGTACCACCCTGTTGTGGAAGCCACTCAAAACACAGAA AGCAATTCTAACATGGACTGTGGTTTAACTGGAAAGCGAGAATTAGAAGTTGACTCCCAATG TGTGAGGATAAAAACTGAATCTGAAGAAGCATGCACAGAGATTCAGCTGTTAACAACTGCTT CATCATCTTTCCCACCTGCATCAGAACTTAATCTACAGCAAGATCAGAAGACTCAGCCTATTC CAGTTTTAAAAGTGGAAAGTAGACTGGACTCTGACCAGCAACACAATCTGCAAGAACATTCA ACCACTTCTGTGTGATATGTACATATTCAAACACATTTTTTAACTTTTTAAATTTTGATGTGAA GTTATAGTTTTATAACTGGCTTAAGTTAAGTTTTATTGGAGAAATCTTGCCTATAATTCTATAA AGAGAAATGACATTCCACAAATGTCAAGCATATCTTTTTTACACAGATTATGCAAAGTTAAGA GTTGTATCTTATCCCGTTAGTACAGTATGTAATAGTGGGTCTGCTGCTACTTTCTGTTTTAAG GTGTGAGGTAACAATTCAATCTCTTCTTCAAATCAAAATGAGAATTCTCTGGAATAACAGATT CTTGTTTGGTAAATTATTCACTTCCCTTAATTTTATCTTGCCTTGTCTCTTTGCCATATTTTGCTGT TTTTATGGATAAATAAGATTTATGGTTTAGTACTTGTGTCTTTATGGCACAGGTTCAATTTCTA ATTTAGTTCTAACCACAAATAACAAGTAGTTTCCAAGGAAATTTCAGTGGCTCTCTGGTTTCTT GCCCAGTGGATATTTCAATTACAAAAAATTTAGGATGAATGGCCCTGGGAATAATAACGGGG CACTAACTGTTAGAAATATGCTACGTGGAAAATTTGGGCAAGACATATGGGCGGACCAGGTG ACGGGCTCCAATGTGGGGATTGCTAAGGCAAATATACGAAAAATGTGGGGAATGGCACAAA **AATCGGGACTAATAGTACAAGTGGTTCACGAGAAAACTTGGTACTGGCTAATCTATANNNN** N

#### Table 4

>139
NTGAGCTCCCGCGGTGGCGGCCGAGGTACCTTCCCCTGAGGAGCCCCCTTCAGA
GGGGTGAAGAGCAGTATCTTCAGAGGCCATCCAAGTTTTAGCATAACAAGGAGGAAAGAG
AATGCAGAGAAGAGGCTGGTGATAGACAAGTTTCATGTTCACAACTTGAATTGCAGAGGTCA
AGAGTTTAAAGAGTTTGGGATGGAAAGAAATCAAGAATTGGGCTCGGCCGCCACCGCGGG
AGCTCCAN

>140

>141

NTGAGCTCCCGCGGTGGCGGCCGAGGTACCTTCCCCTGAGGAGCCCCCTTCAGA GGGGTGAAGAGCAGTATCTTCAGAGGCCATCCAAGTTTTAGCATAACAAGGAGGAAAGAG AATGCAGAGAAGAGGCTGGTGATAGACAAGTTTCATGTTCACAACTTGAATTGCAGAGGTCA AGAGTTTAAAGAGTTTGGGATGGAAAGAAATCAAGAATTGGGCTCGGCCGCCACCGCGGG AGCTCCAN

>142

>143

>144

NNNNATAAGCTAGGGGCGTCCACTCCAGAGCCTGATCCAAAACAGAACGCTAACGG CCGTTGCCCTTACATCTCTCATTTGGAAGTGACAGGTATTAAATAACGGCATATGAAAGCTTA AAAGTCATCAAATACAATCACTGGGTACTTTCGATTACCCAAACCAGGCACTTTCCTAAACTC CCCACTTCTTTACTTCTGCGGTCTCCTTTCTTTTATTCCCCCGCGT

>145

>146

NNNACCGCGGTGGCGGCCGAGGTACGCGGGGGAGATTTTCAACTTAAATCAAAAC CAAGCCCTACTGCCTGGTGAGCAAGAGAGATTCCAAAGACTTTACTTTGAAAAGCATCTCCC AGCTTCTACTTTTTTTAAGGAAAAGTAGATTTTCTTTGTCTTTGTTTTTTGTTTTAAGCAAGAAC CTCTTCCTGGCAAAGTATATACTGGATTTTTATTGCCTTCTTGGGTTTTTTTCCCTACGTGTAT CGGCCGTTATGCTTAGCCAGTTTATTCTTTATTTTTTTACTGGAGTCATTGCCAGTGATGGAA TTTATATTATGAGTTCTACATTCATCTTTCCAGCACTCTGAAGTTATCAGCAAGTTCTCAGTCA GTTCAAGGCATTGGATTCTGCTTGATTTCTTTTTAATTCATTGTTTTTGACCCCCTTTGAGAGTT TTAATAGAGAGGAGTCTGGAAGGCAGAGATCTCCACCACCTAACCGTGAGAAATTTGGAACT AAGGACTTGCACTGGTCCCCAAGTTAACAGTGGATATACTTCCTGCATTTTCTCTGTTCTTTC TTGCATTTGGGCAAAATGTATGAACGGCACAAGAGGCGCTACAGCCTCTGTGACATCTCCAA GGTGGACAGGACTGTGGACGTGGTATTGCTGAAGATAAACCGAGAAAACTGGTGTACAATA GAGCCATGCCCTGATGCAGCATCTCTTCTGGCTTCCAAGCAGAGCCCAGAATGTGAGAACT TCCTGGATGTTGGACTGGGCAGAGAGTGTACCTCAAAACAAGGTGTACTTAAAAGAGAATCT GGGAGTGATTCTGACCTCTTTCACTCACCCAGTGATGACATGGACAGCATCATCTTCCCAAA GCCAGAGGAAGAGCATTTGGCCTGTGATATCACCGGATCCAGTTCATCCACCGATGACACG **AAACAGGTCAAGAGATCGGCAAAGCCTTGATGGATTCTACAGCCATGGGATGGGAGCTGAG** 

### Table 4

NTGAGCTCCCGCGGTGGCGGCCGAGGTACCTTCCCCTGAGGAGCCCCCTTCAGA GGGGTGAAGAGCAGTATCTTCAGAGGCCATCCAAGTTTTAGCATAACAAGGAGGAAAGAG AATGCAGAGAAGAGGCTGGTGATAGACAAGTTTCATGTTCACAACTTGAATTGCAGAGGTCA AGAGTTTAAAGAGTTTGGGATGGAAAGAAATCAAGAATTGGGCTCGGCCGCCACCGCGGG AGCTCCAN

>150

>151

NNNNNNNNNNCAGGAAATCATCAATCGCAGTAGCAGTGAAGCAAATCAGGTGGTT

### Table 4

>154
TCCACCGCGGTGGCGTCCGGCCCCGCCTTTTCTGCGGCTTTCAGCGCGCGTTTC
AGGTCGTCAATGAGGTCGTCGGCATCTTCGAGACCGATGGACAGGCGGATCGTGCCCTGG
CTGATGCCTGCGCCCGCCAGCGCTTCGTCGCTCATGCGGAAATGCGTGGTGCTGGCCGGG
TGGATCACCAGGCTGCGCGCAATCGCCCACGTTGGCCAGGTGGCTGAAGACCTTGAGGGTTT
CAATGAACTTCTTGCCCTGCTCGCGGTTGCCCTTGAGGTCAAAGCT
>155

AGGGCAGCTGGACCAGTAGTACAAAGCACCAGGAGTTAATACCATTCTGGTGAAGGGGATG GTTTTACAAAAGTGAAGGAGCAGGCAGGAGCCACCAGGTTCTGAGGCCAGGCCCAGCCTAC TGCCCAGAACCCCTGAAACGGCTCCCTGGGAAAAAGCTGACAGATGGGTCAGGGGTGGATT GAGCTGGAAACCATGGGGACAGATGGCAGGGATAGAGGGTCATGCAGTGGGAACCACCCA GTGGCTGATAAGGACAGGGAACTTGTGGCTGGAGGCTCCCCATTGGGCCATGGGCAGGGG CTTGCAGATGGCCTCAGCTCTGGGGGCAGGTAGAGAACTGCAGAGACTGATGGGCATGG AGAACCCAGACATGGCCCTGGGGCTGAAGGGCCTTTCCACCCTCTCTCACCAGGAGCCAC CTTTGCTCTATACTACATATGGGGCTTCAGGGCCCAAGGCACAGGGGAGGCTCAGAGGCCT CCAGTTGGGAGGAAGATGGGGCAAGGAAGCACTTGAGTGTCCCTAGCTTAGGCAGC CGGGGATGAGACACAGGCAGGACAACAGCACCCCCGCATAGTGGGGCTAGAATGTGGGAC AGGGACGGCTTATCCTCGGCCAGTGACTAGGACCAGCCCCATGGCAATGGTGCCTGTCTC CAGCCTTAGCAAATCAAGTGTGCAACAAGCACAGGGTGTCGGCAGACCTGGGCTCTAGCCT TACAAGCTCTGCCAGAACTTGAATCACACAGAGCTGTATCACCATGGTCCAGCCATGTCCTG CCTTGGCCTGTTTCCTCCTCTGTCAATGAGGGCTTTGAATAAGACCTCCTAGGTCATGAAAA GGACTCTGCAGGTGAAGGGAACTCCAGGACCTGCTCTTGGCAGTTAAGCAGACCCTGGATG GAACTGGTATGGGATGGGGTGAAGTGGGGGGATGGAGGAAGGTGTTCTTGCATGGAAC CTATCCCCACAAACACTACAGAGTGAGGAAAGGCCACTGGAAGCCCTTCTTTGCCCAGAGG AAGAAAGGCCACAGAGAGAGTGAATGTGGCTTGGTGCAATCCCTTCACATCCTCCACCATCT GGGTAACACTTGGCAAGGAGTGGATGGGTGGCATTGTGCAACCCTTTATGTTCTTCCCTGG GGGTGGCACTCAAGGCCTCTTGTGGCTTCTGCCTTCAGCCTTCAGTGTAGGGTCAAGAGTG GTTGGTGAGGAAAGGACAGAGTGGGTGAGTAAGCAGACAGGGAGGTAAGAGTGACTCTCT GGCTTTCTCCTCTTCAGAGAGCAGCTCAATCAACTGAGTCGCAGATCTCCTCCACC ACAGCATTGAAGATGTGTGGCTGGTCAGCATAGACATGGTGGGAGGCACCCTTAATCTCCA CAGGTGTCGGACCCGTAGATCATAGTGATAGGCACATCTTTTCGAATCAAGTGAATTCGCTC CAGCATAGGGCGCCGGGCCCAAAGGACTCCATCATGGCTTTGAATGCTGTCTCACCA CTGGGATTCTGTGCGTTGCAGTGGTAAATATACTCTGATATGGTATCATCTTCAAAGAAGTCT GCAAACTTGCGTTTGAAGTCCGGCCGGAATCGCTGCACCAGACCAGGCCCCCAGGGCCCA GCTACTCGAAGAACAGCCAATGGATTGGAACGTCCTAGGACAGATGCCACGGCTTTGACCC AGGCTGGGGGTGCACGGATCTCACTGGGGTTAGTTGGTCGGAGGGGAAAGCCCCATGGGT CCTCCCAAACTGTGCCCCAGGAGGATCATGCTGGGGATCCCCATGGTCTCCCGCCATGTCT CTATCGATGTCACAAACTCATCCTCAGCCCCCTCGGGTCCCTTGGGAATGCTGGCCTTGA GCTTCGCCCGAAGCCAAGCAGATCGAAGGTGTGCAGTGTGCGGCGGGCACTCAGTGAGTC CATGTTGAGGATCCAGAGACCCACGCCCCCCAAAACCATGCACCATCACCAAGGGGGTG CATATCTGGCCAGGAACTTATTCTGGAGACACTGGAGGATCCTGGCTTCCACATTCTTCAGC CCCTTCTGTCGTCTTCTCGCAGCCGTAGTCGACGCGGCCGCGAANN

### Table 4

GTGGCAGGCCATGCATGAGCCTCGGACTTTTGCTGTATATCTTAACAACACTGGCTACAGAA CAGCCTTTTTTGGAAAATACCTCAATGAATATAATGGCAGCTACATCCCCCCTGGGTGGCGA GAATGGCTTGGATTAATCAAGAATTCTCGCTTCTATAATTACACTGTTTGTCGCAATGGCATC AAAGAAAAGCATGGATTTGATTATGCAAAGGACTACTTCACAGACTTAATCACTAACGAGAGC ATTAATTACTTCAAAATGTCTAAGAGAATGTATCCCCATAGGCCCGTTATGATGGTGATCAGC CACGCTGCGCCCACGGCCCCGAGGACTCAGCCCCACAGTTTTCTAAACTGTACCCCAATG CTTCCCAACACATAACTCCTAGTTATAACTATGCACCAAATATGGATAAACACTGGATTATGC AGTACACAGGACCAATGCTGCCCATCCACATGGAATTTACAAACATTCTACAGCGCAAAAGG CTCCAGACTTTGATGTCAGTGGATGATTCTGTGGAGAGGCTGTATAACATGCTCGTGGAGAC GGGGGAGCTGGAGAATACTTACATCATTTACACCGCCGACCATGGTTACCATATTGGGCAGT TTGGACTGGTCAAGGGGAAATCCATGCCATATGACTTTGATATTCGTGTGCCTTTTTTTATTC GTGGTCCAAGTGTAGAACCAGGATCAATAGTCCCACAGATCGTTCTCAACATTGACTTGGCC CCCACGATCCTGGATATTGCTGGGCTCGACACACCTCCTGATGTGGACGGCAAGTCTGTCC GAATATCCAACAGTCAAATCACTTGCCCAAATATGAACGGGTCAAAGAACTATGCCAGCAGG CCAGGTACCAGACAGCCTGTGAACAACCGGGGCAGAAGTGGCAATGCATTGAGGATACATC TGGCAAGCTTCGAATTCACAAGTGTAAAGGACCCAGTGACCTGCTCACAGTCCGGCAGAGC ACGCGGAACCTCTACGCTCGCGGCTTCCATGACAAGACAAGAGTGCAGTTGTAGGGAGT CTGGTTACCGTGCCAGCAGAAGCCAAAGAAGAGTCAACGGCAATTCTTGAGAAACCAGGG GACTCCAAAGTACAAGCCCAGATTTGTCCATACTCGGCAGACACGTTCCTTGTCCGTCGAAT TTGAAGGTGAAATATATGACATAAATCTGGAAGAAGAAGAAGAATTGCAAGTGTTGCAACCA AGAAACATTGCTAAGCGTCATGATGAAGGCCACAAGGGGCCAAGAGATCTCCAGGCTTCCA **GTGGTGGCAACAGGGGCAGGATGCTGGCAGATAGCAGCAACGCCGTGGGCCCACCTACCA** TGTACCAATCGGCCAGAGCGTGGAAGGACCATAAGGCATACATTGACAAAGAGATTGAAGC AGGAATGTAGCTGCAGTAAACAAAGCTATTACAATAAAGAGAAAAGGTGTAAAAAAAGCAAGAG AAATTAAAGAGCCATCTTCACCCATTCAAGGAGGCTGCTCAGGAAGTAGATAGCAAACTGCA ACTTTTCAAGGAGAACAACCGTAGGAGGAAGAAGAGGAGGAGGAGAAGACAGCGCAGAG GAAGGGGGAAGAGTGCAGCCTGCCTGGCCTCACTTGCTTCACGCATGACAACAACCACTGG CAGACAGCCCCGTTCTGGAACCTGGGATCTTTCTGTGCTTGCACGAGTTCTAACAATAACAC CTACTGGTGTTTGCGTACAGTTAATGAGACGCATAATTTTCTTTTCTGTGAGTTTGCTACTGG CTTTTTGGAGTATTTTGATATGAATACAGATCCTTATCAGCTCACAAATACAGTGCACACGGT AGAACGAGGCATTTTGAATCAGCTACACGTACAACTAATGGAGCTCAGAAGCTGTCAAGGAT **ATAAGCAGTGCAACCCAAGACCTAAGAATCTTGATGTTGGAAATAAAGATGGAGGAAGCTAT** GACCTACACAGAGGACAGTTATGGGATGGATGGAAGGTTAATCAGCCCCGTCTCACTGCA TGCACTGCTGAAGAGTCACTATGAGCAAAATAAAACAAATAAGACTCAAACTGCTCAAAGTG ACGGGTTCTTGGTTGTCTCTGCTGAGCACGCTGTGTCAATGGAGATGGCCTCTGCTGACTC AGATGAAGACCCAAGGCATAAGGTTGGGAAAACACCTCATTTGACCTTGCCAGCTGACCTTC **AAACCCTGCATTTGAACCGACCAACATTAAGTCCAGAGAGTAAACTTGAATGGAATAACGAC ATTCCAGAAGTTAATCATTTGAATTCTGAACACTGGAGAAAAACCGAAAAATGGACGGGGCA** TGAAGAGACTAATCATCTGGAAACCGATTTCAGTGGCGATGGCATGACAGAGCTAGAGCTC GGGCCCAGCCCCAGGCTGCAGCCCATTCGCAGGCACCCGAAAGAACTTCCCCAGTATGGT GGTCCTGGAAAGGACATTTTTGAAGATCAACTATATCTTCCTGTGCATTCCGATGGAATTTCA **GTTCATCAGATGTTCACCATGGCCACCGCAGAACACCGAAGTAATTCCAGCATAGCGGGGA** AGATGTTGACCAAGGTGGAGAAGAATCACGAAAAGGAGAAGTCACAGCACCTAGAAGGCAG CGCCTCCTCTCACTCTCTCTGATTAGATGAAACTGTTACCTTACCCTAAACACAGTATTTC TTTTTAACTTTTTTATTTGTAAACTAATAAAGGTAATCACAGCCACCAACATTCCAAGCTACCC TGGGTACCTTTGTGCAGTAGAAGCTAGTGAGCATGTGAGCAAGCGGTGTGCACACGGAGAC TTGGTTTTGATTTTTTGCTTGTTTGTTTGTTTGTACTAAAACAGTATTATCTTTTGAATATCGT **AGGGACATAAGTATÁTACATGTTATCCAATCAAGATGGCTATAATGGGCTTTCTCAGAGATAA** 

AACTTGACCCCGTGTCAAATTGACATCACACTCTGCATGTCTGCGTAATGAAGGTACGATGCAACTATAAACCAGTGCAATATGACACTGACACTATATTAAATTCAATAATACNN

NNCACGCGTCCGGCTAATGAATCTTGGGGCCGGTGTCGGGCCGGGGCGGCTTGAT CGGCAACTAGGAAACCCCAGGCGCAGAGGCCAGGAGCGAGGGACGAGGATCAGAGGC CAGGCCTTCCCGGCTGCCGGCGCTCCTCGGAGGTCAGGGCAGATGAGGAACATGACTCTC CCCCTTCGGAGGAAGGAAGTCCCGCTGCCACCTTATCTCTGCTCCTCTGCCTCCCC TGTTCCCAGAGCTTTTCTCTAGAGAAGATTTTGAAGGCGGCTTTTGTGCTGACGGCCACCC ACCATCATCTAAAGAAGATAAACTTGGCAAATGACATGCAGGTTCTTCAAGGCAGAATAATTG CAGAAAATCTTCAAAGGACCCTATCTGCAGATGTTCTGAAATACCTCTGAGAATAGAGATTGAT TATTCAACCAGGATACCTAATTCAAGAACTCCAGAAATCAGGAGACGGAGACATTTTGTCAG TTTTGCAACATTGGACCAAATACAATGAAGTATTCTTGCTGTGCTCTGGTTTTTGGCTGTCCTG GGCACAGAATTGCTGGGAAGCCTCTGTTCGACTGTCAGATCCCCGAGGTTCAGAGGACGGA TACAGCAGGAACGAAAAAACATCCGACCCAACATTATTCTTGTGCTTACCGATGATCAAGAT GTGGAGCTGGGGTCCCTGCAAGTCATGAACAAAACGAGAAAGATTATGGAACATGGGGGGG CCACCTTCATCAATGCCTTTGTGACTACACCCATGTGCTGCCCGTCACGGTCCTCCATGCTC ACCGGGAAGTATGTGCACAATCACAATGTCTACACCAACAACGAGAACTGCTCTTCCCCCTC GTGGCAGGCCATGCATGAGCCTCGGACTTTTGCTGTATATCTTAACAACACTGGCTACAGAA CAGCCTTTTTTGGAAAATACCTCAATGAATATAATGGCAGCTACATCCCCCCTGGGTGGCGA GAATGGCTTGGATTAATCAAGAATTCTCGCTTCTATAATTACACTGTTTGTCGCAATGGCATC AAAGAAAAGCATGGATTTGATTATGCAAAGGACTACTTCACAGACTTAATCACTAACGAGAGC ATTÄÄTTÄCTTCAAAATGTCTAAGAGAATGTATCCCCATAGGCCCGTTATGATGGTGATCAGC CACGCTGCGCCCCACGGCCCCGAGGACTCAGCCCCACAGTTTTCTAAACTGTACCCCAATG CTTCCCAACACATAACTCCTAGTTATAACTATGCACCAAATATGGATAAACACTGGATTATGC AGTACACAGGACCAATGCTGCCCATCCACATGGAATTTACAAACATTCTACAGCGCAAAAGG CTCCAGACTTTGATGTCAGTGGATGATTCTGTGGAGAGGCTGTATAACATGCTCGTGGAGAC GGGGGAGCTGGAGAATACTTACATCATTTACACCGCCGACCATGGTTACCATATTGGGCAGT TTGGACTGGTCAAGGGGAAATCCATGCCATATGACTTTGATATTCGTGTGCCTTTTTTTATTC GTGGTCCAAGTGTAGAACCAGGATCAATAGTCCCACAGATCGTTCTCAACATTGACTTGGCC CCCACGATCCTGGATATTGCTGGGCTCGACACCCTCCTGATGTGGACGGCAAGTCTGTCC GAATATCCAACAGTCAAATCACTTGCCCAAATATGAACGGGTCAAAGAACTATGCCAGCAGG CCAGGTACCAGACAGCCTGTGAACAACCGGGGCAGAAGTGGCAATGCATTGAGGATACATC TGGCAAGCTTCGAATTCACAAGTGTAAAGGACCCAGTGACCTGCTCACAGTCCGGCAGAGC ACGCGGAACCTCTACGCTCGCGGCTTCCATGACAAAGACAAAGAGTGCAGTTGTAGGGAGT CTGGTTACCGTGCCAGCAGAAGCCAAAGAAAGAGTCAACGGCAATTCTTGAGAAACCAGGG GACTCCAAAGTACAAGCCCAGATTTGTCCATACTCGGCAGACACGTTCCTTGTCCGTCGAAT TTGAAGGTGAAATATATGACATAAATCTGGAAGAAGAAGAAGAATTGCAAGTGTTGCAACCA AGAAACATTGCTAAGCGTCATGATGAAGGCCACAAGGGGCCAAGAGATCTCCAGGCTTCCA GTGGTGCAACAGGGGCAGGATGCTGGCAGATAGCAGCAACGCCGTGGGCCCACCTACCA TGTACCAATCGGCCAGAGCGTGGAAGGACCATAAGGCATACATTGACAAAGAGATTGAAGC AGGAATGTAGCTGCAGTAAACAAAGCTATTACAATAAAGAGAAAGGTGTAAAAAAAGCAAGAG AAATTAAAGAGCCATCTCACCCATTCAAGGAGGCTGCTCAGGAAGTAGATAGCAAACTGCA GAAGGGGGAAGAGTGCAGCCTGCCTGGCCTCACTTGCTTCACGCATGACAACAACCACTGG CAGACAGCCCCGTTCTGGAACCTGGGATCTTTCTGTGCTTGCACGAGTTCTAACAATAACAC CTACTGGTGTTTGCGTACAGTTAATGAGACGCATAATTTTCTTTTCTGTGAGTTTGCTACTGG CTTTTTGGAGTATTTTGATATGAATACAGATCCTTATCAGCTCACAAATACAGTGCACACGGT AGAACGAGGCATTTTGAATCAGCTACACGTACAACTAATGGAGCTCAGAAGCTGTCAAGGAT ATAAGCAGTGCAACCCAAGACCTAAGAATCTTGATGTTGGAAATAAAGATGGAGGAAGCTAT GACCTACACAGAGGACAGTTATGGGATGGATGGGAAGGTTAATCAGCCCCGTCTCACTGCA 

### Table 4

TGCACTGCTGAAGAGTCACTATGAGCAAAATAAAACAAATAAGACTCAAACTGCTCAAAGTG ACGGGTTCTTGGTTGTCTCTGCTGAGCACGCTGTGTCAATGGAGATGGCCTCTGCTGACTC AGATGAAGACCCAAGGCATAAGGTTGGGAAAACACCTCATTTGACCTTGCCAGCTGACCTTC AAACCCTGCATTTGAACCGACCAACATTAAGTCCAGAGAGTAAACTTGAATGGAATAACGAC ATTCCAGAAGTTAATCATTTGAATTCTGAACACTGGAGAAAAACCGAAAAATGGACGGGGCA TGAAGAGACTAATCATCTGGAAACCGATTTCAGTGGCGATGGCATGACAGAGCTAGAGCTC GGGCCCAGCCCCAGCCCCATTCGCAGGCACCCGAAAGAACTTCCCCAGTATGGT GGTCCTGGAAAGGACATTTTTGAAGATCAACTATATCTTCCTGTGCATTCCGATGGAATTTCA GTTCATCAGATGTTCACCATGGCCACCGCAGAACACCGAAGTAATTCCAGCATAGCGGGGA AGATGTTGACCAAGGTGGAGAAGAATCACGAAAAGGAGAAGTCACAGCACCTAGAAGGCAG CGCCTCCTCTCACTCTCTGATTAGATGAAACTGTTACCTTACCCTAAACACAGTATTTC TTTTTAACTTTTTTTTTTGTAAACTAATAAAGGTAATCACAGCCACCAACATTCCAAGCTACCC TGGGTACCTTTGTGCAGTAGAAGCTAGTGAGCATGTGAGCAAGCGGTGTGCACACGGAGAC TTGGTTTTGATTTTTTGCTTGTTTGTTTGTTTGTACTAAAACAGTATTATCTTTTGAATATCGT AGGGACATAAGTATACATGTTATCCAATCAAGATGGCTATAATGGGCTTTCTCAGAGATAA AACTTGACCCCGTGTCAAATTGACATCACACTCTGCATGTCTGCGTAATGAAGGTACGATG CAACTATAACCAGTGCAATATGACACTGACACTATATTAAATTCAATAATACNN >161

NNNNNNNNNNNNNNNNNNNNNNNNNNNNNGGGGTGTGGGGTGGGGTGGGGG GGGGGGGGGGGGTGTCTCGCAGTCTTTCAGGGTGCAATTTTGTTTATATACACTGTAT GTATATATTTCTTTTAGATTTGGCTGTAGTGGACTGGCCATGGTTCAAGTGGGACTATAGCAG TACATGGGTCAGGGACAGTCATTTTGGCTATGTACACATTCATAGTCGGTCCATGGCTTCCA ACTAGTAGCGCTATTTCCGAAGGTCTAATACACAAACTGAACCATCTGATGCACTGGCTCCA ACTITGTCTCCTGCTGCATTCCAGCAAACTTCAAATATTCCACCTGTTCCCCTATAGCTGTGA ACTAGAGCACCTGTCTGCGTGTTCCAGATGTGTACACATTTGTCAAAAGAACCACTTGCCAG ATACCTGCCATCAGGACTGAAAGCTACACTGTACACAGGCTCTTGGTGTTTTTGTCAAGGTAT GGATGCATATCCCTCGGTCTACATCCCATAACCTAACAGTAGAATCAAAGGATGCACTTGCT AACATAAGGTTGGCATTTGGATTATTAGTCCCTGGTCCTGTTGGACTCCATTTGATAGTATAA ATTTCTTTATTGTGCTTGCAAATCATGGACACAATTGTCTTGTTTCATACTCCATATCTTTAA AGTCATGTCGTCAGAACAGGAGGCCAAGAGATTGCCAGTTGGGTCCCATTTGATAGCATTTA GCACATATCTGTACTACAAGAAGCAAAGGTGTTGTTGCTCTGCCAATCAACATCCAATGCTG GTGCTGAATGAAAAGGAAACTGTTGCTTGGCTTCACCAGTATGTGCGTCCCAAATAATTGTA GTCTTGTCTACTCCAGCACTTAGGATGAAATTTCCTTTCTTATTCCATTTTAATGCAAATATAG GGCCTTTATGCTGCCCTAAGGTGCTAGCAAGGTTACCATCTTTAGTCCATATTCTGGCAAAC CCATCATAGGAACCAGTTGCTAGAAGTGTACCTTCACTATTCCAATCTAGAGATGTGACATCC TTGTTGCTTGGAACATCTTGCCCTCCTTCTCGTATACAATGTCTAAGTACTAACTGTGTAGAG CCACTGGTGCTGTTCTCACTAAGATTCCATATTCTTGCTGTTGAGTCTCCAGACCCTGATGCT AGGAGATCACTAACAGGGTTCCAGGCACAGATAAAAACTTCAGATTCATGGCCCCGCAACAC AACAGTCTTTATTAGGAGGGATTTCAACATCCCCATCCACTTCCATCATATCAGTATGATTATT TGCTATAGTATGTGCTCCATTCTCCTCCCCATTTGCTGTTTTTCTCCATTTTTTGCAGATCCT TGTTGGCTGCCTGCCGCCAGCTGCAGCAGCTGCTGCTGTTGCTGCAAGCTTAT CTCTATAAGCTTGTTGTCTTGTTTGTACTACATCAGGCATTACGGCATCTATCAGGGACAGAG ACTCTATTGGTCGACCATCAAACAAGGTACCATCCTCATTAATACTAACTTCTGCTTCTACAT ACTGTAGACCTTTCTGGATGATAGAAATCAATGCAGCGGGTGGGACGAGGGCACCATTTATA TTGGACTGACTGATATGGCTTTCTATACCAAAGGTAAATGCTGAATGAGAAAATCCTGACTCT TGCAAGTATCTATATACCAAGAAGTTGACCTCATCACTGCTTATACTCATCTTTATTCCCACTT **AAACCATGAGGTCACAACACAGGATATAACCCATTGGCAGTGCATTGATGTGGGGATGTGCA** ACTGAATATCCGGTCACCGCCAATCACAAGTTGCTGTTGTTGATGCTGGAAACGGTGGCCTC CAACGCCGCTCCCCCCCCGGGAATGGAGGCACAAGGAAATTCCCCCGGACGCGGGGTC GATCCN. >162

NNCACGCGTCCGGCTAATGAATCTTGGGGCCGGTGTCGGGCCGGGGCGGCTTGAT CGGCAACTAGGAAACCCCAGGCGCAGAGGCCAGGAGCGAGGGCAGGGCAGAGGCCCAGGGCCAGAGGCCAGAGGCCAGATGAGGACATGACTCTC

CCCCTTCGGAGGAGGAAGGAAGTCCCGCTGCCACCTTATCTCTGCTCCTCTGCCTCCCC TGTTCCCAGAGCTTTTCTCTAGAGAAGATTTTGAAGGCGGCTTTTGTGCTGACGGCCACCC ACCATCATCTAAAGAAGATAAACTTGGCAAATGACATGCAGGTTCTTCAAGGCAGAATAATTG CAGAAAATCTTCAAAGGACCCTATCTGCAGATGTTCTGAAATACCTCTGAGAATAGAGATTGAT TATTCAACCAGGATACCTAATTCAAGAACTCCAGAAATCAGGAGACGGAGACATTTTGTCAG TTTTGCAACATTGGACCAAATACAATGAAGTATTCTTGCTGTGCTCTGGTTTTGGCTGTCCTG GGCACAGAATTGCTGGGAAGCCTCTGTTCGACTGTCAGATCCCCGAGGTTCAGAGGACGGA TACAGCAGGAACGAAAAACATCCGACCCAACATTATTCTTGTGCTTACCGATGATCAAGAT GTGGAGCTGGGGTCCCTGCAAGTCATGAACAAAACGAGAAAGATTATGGAACATGGGGGGG CCACCTTCATCAATGCCTTTGTGACTACACCCATGTGCTGCCCGTCACGGTCCTCCATGCTC ACCGGGAAGTATGTGCACAATCACAATGTCTACACCAACAACGAGAACTGCTCTTCCCCCTC GTGGCAGGCCATGCATGAGCCTCGGACTTTTGCTGTATATCTTAACAACACTGGCTACAGAA CAGCCTTTTTTGGAAAATACCTCAATGAATATAATGGCAGCTACATCCCCCCTGGGTGGCGA GAATGGCTTGGATTAATCAAGAATTCTCGCTTCTATAATTACACTGTTTGTCGCAATGGCATC AAAGAAAAGCATGGATTTGATTATGCAAAGGACTACTTCACAGACTTAATCACTAACGAGAGC ATTAATTACTTCAAAATGTCTAAGAGAATGTATCCCCATAGGCCCGTTATGATGGTGATCAGC CACGCTGCGCCCCACGGCCCCGAGGACTCAGCCCCACAGTTTTCTAAACTGTACCCCAATG CTTCCCAACACATAACTCCTAGTTATAACTATGCACCAAATATGGATAAACACTGGATTATGC AGTACACAGGACCAATGCTGCCCATCCACATGGAATTTACAAACATTCTACAGCGCAAAAGG CTCCAGACTTTGATGTCAGTGGATGATTCTGTGGAGAGGCTGTATAACATGCTCGTGGAGAC GGGGGAGCTGGAGAATACTTACATCATTTACACCGCCGACCATGGTTACCATATTGGGCAGT TTGGACTGGTCAAGGGGAAATCCATGCCATATGACTTTGATATTCGTGTGCCTTTTTTTATTC GTGGTCCAAGTGTAGAACCAGGATCAATAGTCCCACAGATCGTTCTCAACATTGACTTGGCC CCCACGATCCTGGATATTGCTGGGCTCGACACACCTCCTGATGTGGACGGCAAGTCTGTCC GAATATCCAACAGTCAAATCACTTGCCCAAATATGAACGGGTCAAAGAACTATGCCAGCAGG CCAGGTACCAGACAGCCTGTGAACAACCGGGGCAGAAGTGGCAATGCATTGAGGATACATC TGGCAAGCTTCGAATTCACAAGTGTAAAGGACCCAGTGACCTGCTCACAGTCCGGCAGAGC ACGCGGAACCTCTACGCTCGCGGCTTCCATGACAAAGACAAAGAGTGCAGTTGTAGGGAGT CTGGTTACCGTGCCAGCAGAAGCCAAAGAAAGAGTCAACGGCAATTCTTGAGAAACCAGGG GACTCCAAAGTACAAGCCCAGATTTGTCCATACTCGGCAGACACGTTCCTTGTCCGTCGAAT TTGAAGGTGAAATATATGACATAAATCTGGAAGAAGAAGAAGAATTGCAAGTGTTGCAACCA AGAAACATTGCTAAGCGTCATGATGAAGGCCACAAGGGGCCAAGAGATCTCCAGGCTTCCA GTGGTGGCAACAGGGCAGGATGCTGGCAGATAGCAGCAACGCCGTGGGCCCACCTACCA TGTACCAATCGGCCAGAGCGTGGAAGGACCATAAGGCATACATTGACAAAGAGATTGAAGC AGGAATGTAGCTGCAGTAAACAAAGCTATTACAATAAAGAGAAAGGTGTAAAAAAAGCAAGAG AAATTAAAGAGCCATCTTCACCCATTCAAGGAGGCTGCTCAGGAAGTAGATAGCAAACTGCA GAAGGGGGAAGAGTGCAGCCTGCCTGGCCTCACTTGCTTCACGCATGACAACAACCACTGG CAGACAGCCCCGTTCTGGAACCTGGGATCTTTCTGTGCTTGCACGAGTTCTAACAATAACAC CTACTGGTGTTTGCGTACAGTTAATGAGACGCATAATTTTCTTTTCTGTGAGTTTGCTACTGG CTTTTTGGAGTATTTTGATATGAATACAGATCCTTATCAGCTCACAAATACAGTGCACACGGT AGAACGAGGCATTTTGAATCAGCTACACGTACAACTAATGGAGCTCAGAAGCTGTCAAGGAT ATAAGCAGTGCAACCCAAGACCTAAGAATCTTGATGTTGGAAATAAAGATGGAGGAAGCTAT GACCTACACAGAGGACAGTTATGGGATGGATGGAAGGTTAATCAGCCCCGTCTCACTGCA TGCACTGCTGAAGAGTCACTATGAGCAAAATAAAACAAATAAGACTCAAACTGCTCAAAGTG ACGGGTTCTTGGTTGTCTCTGCTGAGCACGCTGTGTCAATGGAGATGGCCTCTGCTGACTC AGATGAAGACCCAAGGCATAAGGTTGGGAAAACACCTCATTTGACCTTGCCAGCTGACCTTC AAACCCTGCATTTGAACCGACCAACATTAAGTCCAGAGAGTAAACTTGAATGGAATAACGAC ATTCCAGAAGTTAATCATTTGAATTCTGAACACTGGAGAAAAACCGAAAAATGGACGGGGCA TGAAGAGACTAATCATCTGGAAACCGATTTCAGTGGCGATGGCATGACAGAGCTAGAGCTC

#### Table 4

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CACTATTTTTTTTTTTGAGATGGAGTCTCGCTCTGTCGCCCAGGCTGGAGTGCA ATGGCACAATCTCAGCTCACCGCAACCTCCACCTCCCAAGGTTCAAGTGATTCTCTTGCCTC GGGGAGACATCCCTCAGTGCTTAGACATATTCTGAGCCTACAGCAGAGGAACCTCCAGTCT CAGCACCATGAATCAAACTGCCATTCTGATTTGCTGCCTTATCTTTCTGACTCTAAGTGGCAT TCAAGGAGTACCTCTCTAGAACTGTACGCTGTACCTGCATCAGCATTAGTAATCAACCTGT TAATCCAAGGTCTTTAGAAAAACTTGAAATTATTCCTGCAAGCCAATTTTGTCCACGTGTTGA GATCATTGCTACAATGAAAAAGAAGGGTGAGAAGAGATGTCTGAATCCAGAATCGAAGGCCA TCAAGAATTTACTGAAAGCAGTTAGCAAGGAAAGGTCTAAAAGATCTCCTTAAAACCAGAGG GGAGCAAAATCGATGCAGTGCTTCCAAGGATGGACCACACAGAGGCTGCCTCTCCCATCAC TTCCCTACATGGAGTATATGTCAAGCCATAATTGTTCTTAGTTTGCAGTTACACTAAAAGGTG ACCAATGATGGTCACCAAATCAGCTGCTACTCCTGTAGGAAGGTTAATGTTCATCATCCT AAGCTATTCAGTAATAACTCTACCCTGGCACTATAATGTAAGCTCTACTGAGGTGCTATGTTC TTAGTGGATGTTCTGACCTGCTTCAAATATTTCCCTCACCTTTCCCATCTTCCAAGGGTATA AGGAATCTTTCTGCTTTGGGGTTTATCAGAATTCTCAGAATCTCAAATAACTAAAAGGTATGC AATCAAATCTGCTTTTTAAAGAATGCTCTTTACTTCATGGACTTCCACTGCCATCCTCCCAAG GGGCCCAAATTCTTTCAGTGGCTACCTACATACAATTCCAAACACATACAGGAAGGTAGAAA TATCTGAAAATGTATGTAAGTATTCTTATTTAATGAAAGACTGTACAAAGTAGAAGTCTTAG **ATGTATATATTCCTATATTGTTTTCAGTGTACATGGAATAACATGTAATTAAGTACTATGTATC AATGAGTAACAGGAAAATTTTAAAAATACAGATAGATATATGCTCTGCATGTTACATAAGATAA** 

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>167

>168

>169

CAGTTGAGGGGAGATAGGCAATCAAATATACAATTATAATACAGAATACATTCAATAATAGTG GAAGTACCTGCCCGGGCGGCN >170

ATATATTATCTTATAGAAATAACTAAGGGAAGTTAGTGCCTTGTGACCACATCTATGT GACTTTTAGGCAGTAAGAAACTATAAGGAAAGGAGCTAACAGTCATGCTGTAAGTAGCTACA GGGAATTGGCTTAAAGGGCAAGCTGGTTAGTACTTAGCTGTTTTTATTCAAAGTCTACATT TTATGTAGTGGTTAATGTTTGCTGTTCATTAGGATGGTTTCACAGTTACCATACAAATGTAGA TGACCATTGTTGGTTGGGAGACTGAAGGTGATTGAAGGTTCACCATCATCCTCACCAACTTT TGGGCCATAATTCACCCAACCCTTTGGTGGAGCCTGAAAAAAATCTGGGCAGAATGTAGGAC TTCTTTATTTTGTTTAAAGGGGTAACACAGAGTGCCCTTATGAAGGAGTTGGAGATCCTGCAA GGAAGAGAAGGAGTGAAGGAGAGATCAAGAGAGAGAAACAATGAGGAACATTTCATTTGAC CCAACATCCTTTAGGAGCATAAATGTTGACACTAAGTTATCCCTTTTGTGCTAAAATGGACAG TATTGGCAAAATGATACCACAACTTCTTATTCTCTGGCTCTATATTGCTTTGGAAACACTTAAA CATCAAATGGAGTTAAATACATATTTGAAATTTAGGTTAGGAAATATTGGTGAGGAGGCCTCA AAAAGGGGGAAACATCTTTTGTCTGGGAGGATATTTTCCATTTTGTGGATTTCCCTGATCTTT TTCTACCACCCTGAGGGGTGTTGGGGGGAATTATCATTTTGCTACATTTTCAGAGGTCATCCA GGATTTTTGAAACTTTACATTCTTTACGGTTAAGCAAGATGTACAGCTCAGTCAAAGACACTA **AATTCCTTCTTAGAAAAAATAGTGCTAAGGAGGNNN** >171

NCGGGAAGTTCCAACTGTGGCAGAAATGAAGATGGAACTTCTCAAGAATAAACAGTT TTGGCCGGGTGTGGCTCACGCCTGAAATCCCAGCACTTTGGAAGGCCAAGGTGGGCT GATCACATGAGGCCAGGAGTTCGAGACCAGCCTGGCCAATATGGCAAAACCCCATCTCTAC TAAAAATATAAAAATGAGACGGGCATGGTGGCACACCCTGTAATCCTAGCTACTCAGGAGG CTGAGGCACGAGAGTCGCTTGAACCCAAAAGGCAGAGTTTGCAGTGAGCCAAGATCATGCC GCACTCATCCCCTAGATATCCCCCAAGTGTCTCTCTCCCCTTTGGTCAAGGTTATAACTGG GATAATGATTATGACAGACTGGCTGGGTGTCAGAGGTACAGATTTAAGGTTGATGGACTCAG GGTAAGGATAGCTACAGCTGTGTGGGGCTGAAGGTCTGTGGCACTGAGCTACTGGGGAAG GAGGGCTCTGTTTTCATTGTGACACACTGAGTTAATAAAGCACTTACTGAGGGAGCCAGAGC CCAAACTCTAAATGTGCTGTAGAAAAAGGGCCAAGTCATTGACTGCACCACTCCTTCAGCCA GAGGTAGAAAGGATTTACTCTTCAGCCATCTGGTAGAGCCCCAAGAACAAGTTACATGTGGA GAAAAGGAGGTTTTCTCGTTGGCCAACATGGTGTACCACTTGCGCTGGGCATAGGTGAACA CCCAGGAACGATCACACACCAATGCAGCTATCCCGGGACATGTCCACATCTGCCACTCCT **ATCCGGAACTGCTGGGAGCGCTTCACTGTCACTTCCCAGTAGTGTCTGCCACTGGTGACCG CTGTGTCN** 

>174 >175

AGGGAGTCCGCCACGCGTCCGCCGGGTTTTAGTTCCTCGGGGAGCCCCTGGTGC CCAGGACACCCGGAAGCCGGAAATGGACTCAGTGGCCTTTGAGGATGTGGCTGTGAACTTC ACCCAGGAGGAGTGGGCTTTGCTGAGTCCTTCCCAGAAGAATCTCTACAGAGATGTGACGC TGGAAACCTTCAGGAACCTGGCCTCGGAATCCAATGGAAAGACCAGGACATTGAGAATCTG TACCAAAACCTGGGGATTAAGCTAAGAAGTCTGGTGGAGAGACTCTGTGGACGTAAAGAAG GGAATGAACACAGAGAAACTTTCAGCCAGATTCCTGATTGTCACCTGAACAAGAAAAGTCAA GGACAGGCACATGAGAGCTCATGCTGGACACAAACGATCTGAGTGTGGTGGGGAATGGAG AGAGACGCCCGTAAACAGAAACAACATGGGAAAGCCTCCATTTCCCCCAGTAGTGGTGCA CGGCGCACAGTAACACCAACTCGAAAGAGACCTTATGAATGCAATGCTGTGCGGGAAAGCC TTTAATTCTCCCCATTAATCTCACATCCATCAAAGGATCTCACACTGGAAAGAGGTCCTATAA TGTAGGAATGTGAGAGCTCCCAGTTTCAGGTTCTTCGAGACGGGAACTGCTTCTGGGAAAA GGTTGATGTAGTCGGGGGAAACCTTGATTCCCGGTTTTCATTCGTAGACTCCGGAAAACCTC **ATGTACAGGGAAGCTTTCGAGACGGCAAAATCCCNN** >176

tgtgatggcccacaagaatagggaaatgaactagagcacaaaccattttcaacagtcttcagtagtaagtcattcgttggaa CATACAGTGTGCaacAGGGGTGGTACAGTTGGATttqGCATCACCGTTGCATTTACTTGTGATG CATCAGAGACACaacCTGTTGAAACATGAGAAAGCĂTTTCGGCACCCTCAAATGTACTGGGAA AGAAGCTGTAGAAATGATGGATCTTTAAAACATGCTTCTGGATTGAAGGTAGATTGTTGTGG CTGCTGCAAATTTACTGCATTTGTGGAGAGAATCATGCTGGCAAGAAGAGAAGAGCTGTCCAT TACTCTGTAGAAGTTCttgAGCAATttcgGCTCCATCCAGTGGTTtacAGTAAGATCGCTtggATAAG TGCCCACCCAGTGATCTGGGATTAGTAAAAGCCCTGTAACACCTGCTACAGATAAATTTCCC GGGCCCGCCACGGTCTTTTTTAACTTTTTCAGGTGCAGACTGTTGGGCATTGGTGCTACT GAAGTTATTTGCAACATTCACTTGTGAAGGAAAAACTGCATTTTCACCATTACCCCCCTTTAG AAAGGAGGAATTAGTGTTTCCTTCAATCTGTGAGGAATAATGATTTGTATTATTTTCCAGTTG GGAAAAAACAGAATTAGTCCCACTATCTGCTGGTGAAGGGAAGAGAGACATTGAACTACTTT CTGCAGGTAAAGGAAGGAAAGGATCTGAGCCACTGTCAATATTCAAAGGCAGAACTGTTTTG GTTAGATCTTCCATTTGTGCTGGCAAGGCAGTACTAGGTAAATTTTCCATTTGGGAACATAAC ATACCACCTTGTTCATTTTTATCCTGAGAAGTTATATTTGGATTTATGACACTTTCCATTGAGG ACAACAATGGAGTTGACACACTTGCTAAATGAGCTGGAAAAATGGGTGGCGAGACATGCTG CAACTGGGCCGAACAAGCAGGATTCCCATTGGCTTTGGTCTGTGATGTAAAAAATGGATTTG AGCTGTTCACCGGTGATGGCAAAAAATAAACAAACTTTCCATTATTTGGTGTATTTAAGTTGT TAGCTTTCTGACCTTTTTTACTTTTTGCGCTGCATTTTAAATGCAGCATATTGGTCAGGGTGTG CTGTCTTCATGTGTTTCCCAATACTCTGTGAAGAATTATAGGTTCGAGTACATCCCTCGACCT GGCAGCTGAATTTCTGAACTGGAGCTTTTGGAGGCACTGATGGAGTTCCTAATGAATTACTT AGGTCGGACTGCGGTGGAACAAATGCAATACTTTCTAATGTCTTAAGAGGTAAATTATAAAGA TTGGATGATGTTTTAACATTATCTCCACATTCAAATTTGGAAGTTGGTAAATTGTTTTGAAATG TAAGGTCACCTATTTTGAGAGTTTCTGAATTTACTAAAGAATTCTGAGTAACATGGGCATCAT TAAAGCAATCTTGTTCTTTTCTCTCTGGAAACCTGGATGACACAAATCATTACAAGTATCTTC **AACTGGCGTATGTAAGTCTGTGACCAGTGCTTCACCACTGCCTTCCACAGTTGAGTTTTCTT** GCTTTCCAAAGTTATCCTCAATCCCCTGATTGAGAGACACCTTAATGGACACAGCTACTTCAC TGGATTGAAGTAGAGGAGTAGTAGCAGGGTTTTCCAAACCATTTGACAATGGTCCATTAGCT

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### Table 4

TGCCTGAGCTCAGAGGCAGAAATCTGGTCTTGTTTGGTCACAGCTGATTCTGCTTTT ATCCCAAGCATCACTTCTATCTGCTAGTAAGCTGttctcaacgTTATTTTCTGAAGGAAGCATAGA TCTTTCTTTCTCAATATTCTCTGCTGTGTTCTGATTCACTTCAGAAGGCTGAATGGAATCTCCA GATGAATTAAGTTGGGCTTCAGGAGGCACCTTTTTCAGGAGGAGT >177

TGGCGGCCGCCGGGCAGGTACCAAACCATTTTCACTAGTTCAGGATAGGAATATT CATCAGATTGTCTCTGTAAAAGTGAATCACAAAAATTCCACCTGTGTAGGTGTGGGACTGGA CAGCTGAGTGACAGGGCCCTGGGAAGAACCACTTTTCCTCTTTCCTCTGAAATATC AGAAGTTAAAAATCTACTCTGAGTTATATGTGCATCAATTTTAGACATATTGCTGATTTTATTA TGAAAATGAAGTGCTAAAGACAAAGGATATTTCCATTCCTCTGGACAGGCAGCCACAGACCA GCACTGCTTGACCCATGTGTATACACATGTGTGCTTTGTACCAGGCGAAGGCAGCTCTTCCC TCCCTTCAGTTCCATTTACACAACTCATCTTCTTTAAAGTTTCTTTGGATTTCATGATCTGGCA ATGAAACTCATTTTCTTTATTCTTCAGTCTCTGTCTGGTAAATTTCCACGTATACAGATTTTG CCAGTTTTTTCAACTAGTTTATCTTTTGGGCTTTATTATTTTTTTCTTCAACAACACTGCAGATG AGTCTGACTTCTGGCTAACTTTACACAAAAAAATGTACTGTAAATTCATGCTGAGATCTGGGCA GGCAGAGGTATGCANNN

NNATGTGGTTACGACCCACTGTATTGAGGTGACGCGATCCATAGGCTGTGGTGTTT GTTTTCGCTGATCCACACAACGTTGGGGCACTGTCTATTCATGTGTTCAAGCTGAAGGCTC GTTCTCGGTTGTCATTTTACAGTGTTTTTCTACGGGGTTACATTACAGGAATGTTGTAGCGAC GTTTAGCCCGTGGAGTATCAACGTCTTGAGACTCCGTGTGAGACTCCCTGGTTTGTTCCACA ACAGTGTGTTTTTAGATTCCGTACCTTTGATTAAGGAACACATCATGCCGTGAAGCCAATTTA TATTCTGCAATTCCGTAGTGCATGTAATGTATTCTGCCGTCTCGTAGTGTGAAGCCATGCTTG GCACATCCAGTTCTTGATGTCTGGCTGCCTTCTGCGGGCCAACTGTCTTGTGGAATTCGTT GCTCCCAGAGATAGCTTGAACTGCAGATCCCGCACAGCATTGCACTGAGCTGTCGTTGTATC TGAGCCTGGACATGGCGGCCGAGGTACTCACAGTCACGCAAATTCACAGTCTGCGTGCACG GCTCTCCATTCTTCTTCGGCTTTACAGGTTCCCAGGTCAAGAGCTTCACCCATAATTAAGA CCTTCTGAGGATGATCGATAGATAAACACACCTCCTCTGAACCATCCTTGGGCTTCATGGGG TTGGCATTGAGGATCCCTACGACAGTCCCCTGCTCCGTCTTCCAGAGCGCTTTGTGAACTTC TCCAAATAAGAACAAGGACACATTGTGTCAGGTCACGAAGATCATTCAGTTTCCATATGCT GAAGGTTTTTCCACTATTCACACTCTGTGGCGTAACCTTCTTCAATATAACCCCAAATGTCAC CCAATCTATTTCTTCCAGCTTCTCTCTGGCCATCTTTTCCTTGATCTGAGACAGTCTGATCAG TTTTCGGCCGGTCATGTCTTCGTTCATATTCTCTGGAGGATACTCGAGCCCGCCTCGAGC CGCAGACCAGGAGAAGGCTTCCACACAGATGGCGATTGAGTCGTTTCCTCACAGAACTTTC ACTCGGGGTCCACCACATATTTGACCTCTAGTTATCCCACTAGGTTTGTTCCGAGAAATCGT CTGTAGGGGTTGGGAGGTGCACTTGTCATCCTTGAAGATGAGCTTTTGGGATCTGGAGGT GAAGCCTTTGGTGTTCGAGCCACCCTCTTGGTTCTTGGTAGCGCAGGGACATCAAGCTCCG CAGAAAAGCATGTTGACTCCTGAATTCTCTGAACTCTCCTCTCTTAAGAGGTGGCCGGGGA AGCTGCTCTTGTAAGGCCTTCATTTGCTCTTGCAAATTCCTTAATTCCTCTTGCAACTCTTCAT TCGTTTTCTCTCGCCTGGGGGCAGGAGCAGGGGGCCCTATTTTCAGTTGACTGTGATGC GGGAACTTCTTCATCTGTTAAGTCCTCCATATCTCCAAAGAGAGTGGCCAGATTTTCCTT TTCGTCTCTTGTCTCCCTGTTTCTCCATCATCAGCCTCTTCTGTATAAGATTCACCGTCGCC GTCGGCATCAAAGAGCTCATCAAATGCGTCGGGCTCGCCATTTTCCCGCGTCAAGAAGTTAT TTTCTTCTGAATTACAATCCAAGGCTGACTCATTTTCTTCCAGCAGTGCGGTCAGCAGAGACA GATTGTCTTCCTCCTCATCCATGCTGTCAAGAGGACAGTTGTGACAGGAAACTTCGAAGGAG GCTCAGATGCCCAGATGAGCAATGTAGAATCTTGGCCGATGCCGGGACGCCTTCTTCGTTC **ACAGCTGAACCCGCCAAAATCGGACNN** >180

GCACATCCAGTTCTTTGATGTCTGGCTGCCTTCTGCGGGCCAACTGTCTTGTGGAATTCGTT GCTCCCAGAGATAGCTTGAACTGCAGATCCCGCACAGCATTGCACTGAGCTGTCGTTGTATC TGAGCCTGGACATGGCGGCCGAGGTACTCACAGTCACGCAAATTCACAGTCTGCGTGCACG GCTCTCCATTCTTCTTGGCTTTACAGGTTCCCAGGTCAAGAGCTTCACCCATAATTAAGA CCTTCTGAGGATGATCGATAGATAAACACACCTCCTCTGAACCATCCTTGGGCTTCATGGGG TTGGCATTGAGGATCCCTACGACAGTCCCCTGCTCCGTCTTCCAGAGCGCTTTGTGAACTTC TCCAAATAAGAACAAGGACACACATTGTGTCAGGTCACGAAGATCATTCAGTTTCCATATGCT GAAGGTTTTTCCACTATTCACACTCTGTGGCGTAACCTTCTTCAATATAACCCCAAATGTCAC CCAATCTATTTCTTCCAGCTTCTCTCTGGCCATCTTTTCCTTGATCTGAGCAGTCTGATCAG TTTTCGGCCGGTCATGTGTCTTCGTTCATATTCTCTGGAGGATACTCGAGCCCGCCTCGAGC CGCAGACCAGGAGAAGGCTTCCACACAGATGGCGATTGAGTCGTTTCCTCACAGAACTTTC ACTCGGGGTCCACCACATATTTGACCTCTAGTTATCCCACTAGGTTTGTTCCGAGAAATCGT CTGTAGGGGTTGGGAGGTGCACTTGTCATCCTTGAAGATGAGCTTTTGGGATCTGGAGGT GAAGCCTTTGGTGTTCGAGCCACCCTCTTGGTTCTTGGTAGCGCAGGGACATCAAGCTCCG CAGAAAAGCATGTTGACTCCTGAATTCTCTGAACTCTCCTCTCTTAAGAGGTGGCCGGGGA AGCTGCTCTTGTAAGGCCTTCATTTGCTCTTGCAAATTCCTTAATTCCTCTTGCAACTCTTCAT TCGTTTTCTCTCGCCTGGGGGCAGGAGCAGGGAGCCCTATTTTCAGTTGACTGTGATGC GGGAACTTCTTCATCTGTTAAGTCCTCCATATCTCCAAAGAGAGTGGCCAGATTTTCCTT TTCGTCTCTTGTCTCTCTGTTTCTCCATCATCAGCCTCTTCTGTATAAGATTCACCGTCGCC GTCGGCATCAAAGAGCTCATCAAATGCGTCGGGCTCGCCATTTTCCCGCGTCAAGAAGTTAT TTTCTTCTGAATTACAATCCAAGGCTGACTCATTTTCTTCCAGCAGTGCGGTCAGCAGAGACA GATTGTCTTCCTCCTCATCCATGCTGTCAAGAGGACAGTTGTGACAGGAAACTTCGAAGGAG GCTCAGATGCCCAGATGAGCAATGTAGAATCTTGGCCGATGCCGGGACGCCTTCTTCGTTC **ACAGCTGAACCCGCCAAAATCGGACNN** >181

NNATGTGGTTACGACCCACTGTATTGAGGTGACGCGATCCATAGGCTGTGGTGTTT GTTTTCGCTGATCCACACAAACGTTGGGGCACTGTCTATTCATGTGTTCAAGCTGAAGGCTC GTTCTCGGTTGTCATTTTACAGTGTTTTTCTACGGGGTTACATTACAGGAATGTTGTAGCGAC GTTTAGCCCGTGGAGTATCAACGTCTTGAGACTCCGTGTGAGACTCCCTGGTTTGTTCCACA ACAGTGTGTTTTTAGATTCCGTACCTTTGATTAAGGAACACATCATGCCGTGAAGCCAATTTA TATTCTGCAATTCCGTAGTGCATGTAATGTATTCTGCCGTCTCGTAGTGTGAAGCCATGCTTG GCACATCCAGTTCTTTGATGTCTGGCTGCCTTCTGCGGGCCAACTGTCTTGTGGAATTCGTT **GCTCCCAGAGATAGCTTGAACTGCAGATCCCGCACAGCATTGCACTGAGCTGTCGTTGTATC** TGAGCCTGGACATGGCGGCCGAGGTACTCACAGTCACGCAAATTCACAGTCTGCGTGCACG **GCTCTCCATTCTTCTTCTTGGCTTTACAGGTTCCCAGGTCAAGAGCTTCACCCATAATTAAGA** CCTTCTGAGGATGATCGATAGATAAACACACCTCCTCTGAACCATCCTTGGGCTTCATGGGG TTGGCATTGAGGATCCCTACGACAGTCCCCTGCTCCGTCTTCCAGAGCGCTTTGTGAACTTC TCCAAATAAGAACAAGGACACACATTGTGTCAGGTCACGAAGATCATTCAGTTTCCATATGCT GAAGGTTTTTCCACTATTCACACTCTGTGGCGTAACCTTCTTCAATATAACCCCAAATGTCAC CCAATCTATTTCTTCCAGCTTCTCTCTGGCCATCTTTTCCTTGATCTGAGACAGTCTGATCAG TTTTCGGCCGGTCATGTCTTCGTTCATATTCTCTGGAGGATACTCGAGCCCGCCTCGAGC CGCAGACCAGGAGAAGGCTTCCACACAGATGGCGATTGAGTCGTTTCCTCACAGAACTTTC ACTCGGGGTCCACCACATATTTGACCTCTAGTTATCCCACTAGGTTTGTTCCGAGAAATCGT CTGTAGGGGTTGGGAGGTGCACTTGTCATCCTTGAAGATGAGCTTTTGGGATCTGGAGGT GAAGCCTTTGGTGTTCGAGCCACCCTCTTGGTTCTTGGTAGCGCAGGGACATCAAGCTCCG CAGAAAAGCATGTTGACTCCTGAATTCTCTGAACTCTCCTCTCTTAAGAGGTGGCCGGGGA AGCTGCTCTTGTAAGGCCTTCATTTGCTCTTGCAAATTCCTTAATTCCTCTTGCAACTCTTCAT TCGTTTTCTCTCGCCTGGGGGCAGGAGCAGGGAGCCCTATTTTCAGTTGACTGTGATGC **GGGAACTTCTTCTTCATCTGTTAAGTCCTCCATATCTCCAAAGAGAGTGGCCAGATTTTCCTT** TTCGTCTCTTGTCTCCTGTTTCTCCATCATCAGCCTCTTCTGTATAAGATTCACCGTCGCC GTCGGCATCAAAGAGCTCATCAAATGCGTCGGGCTCGCCATTTTCCCGCGTCAAGAAGTTAT TTTCTTCTGAATTACAATCCAAGGCTGACTCATTTTCTTCCAGCAGTGCGGTCAGCAGAGACA GATTGTCTTCCTCCTCATCCATGCTGTCAAGAGGACAGTTGTGACAGGAAACTTCGAAGGAG

GCTCAGATGCCCAGATGAGCAATGTAGAATCTTGGCCGATGCCGGGACGCCTTCTTCGTTC ACAGCTGAACCCGCCAAAATCGGACNN >182

NACAGCTGGCGAGTGTACCCGTTTCTGCGAGAGAAGCTAAAGAATGCCCTTGCGTG AGGAAATTAAATTTATGTTCAAGCTAAATGTCGTTTATGGCACTGGGAACACAAGCATTGTCG TAACAAGTTCTGGTGGAAATCCGTACATGGATACGTTCTCTTCTGGGGGGCGGTCTCCAGTCC TTTCTCATGAGGGAGCACACTCCTCTGCCTCATTGCAGTGGCCTCAGGGGATATGGAATTAAG GGCTGGCGATCTGGAGTAAAGGATCCTCACATCCACGTGAACCAGGAAACTCTGTGCCCAA ATCGACGAAAAAAAACACTGGGAGGCCGAACTAAAAGTCTTTTAGCACGGGTACCAGCC CTAGAATTTCCAGTAGACCAGCAGACAGCCGGGAAACCAGATCCTCATCAAAAGACAGAAA GAAAAAATTCGAAGCCAGCCTGAGAAGGGCCCTATTTCAATGCTGTTAACCACTGAGACTG CATCCTCAACAGTGAGACAGGATGGACCAACATACTCAAGCTCAAGGAAACATCTAACACCG GTCGGAAACTCATGGGATCACCGGTACCTAGGATTAGGCCATATAAAGTTTACCGTTACAGA .CTGGGCATAGGGACCTAGCTGACAACACGCAGTACCAAGGGCCTTAAAAGCAGCCCAGACC CCCGTCTCGGCACAGGTGCCACATCACGAGACGCTATGGCTAAACCACAGTATAGACGGGC GCCCAAATGAGAGGACACCGGCCGCCTTGGTTGTCACGGCACAAGAGCATCGCCATCAGA GGTAGGGCATAGAACATGACTACTACGCGGAGGGCAGCACAACGCAACACAATATATACAG AAAGAATGAAACGTACAGAAACTTCAGCAAGTGATCTGCTTTCTTGTGTTGTCTTCTCCTGAC CNNN >183

tatAGGGAGTCGACCCACGCGTCCGGcCAGAGTAAAGCAAAGAGAAAGGAAGCAGGC CCGTTGGAAGTGGTTGTGACAACCCCAGCAATGTGGAGAAGCCTGGGGCTTGCCCTGGCTC TCTGTCTCCCCATCGGGAGGAACAGAGGCCAGGACCAAAGCTCCTTATGTAAGCAACC CCCAGCCTGGAGCATAAGAGATCAAGATCCAATGCTAAACTCCAATGGTTCAGTGACTGTGG TTGCTCTTCAAGCCAGCTGATACCTGTGCATACTGCAGGCATCTAAATTAGAAGACCTG CGAGTAAAACTGAAGAAAGAAGGATATTCTAATATTTCTTATATTGTTGATCATCAAGGAA TCTCTTCTCGATTAAAATACACACATCTTAAGAATAAGGTTTCAGAGCATATTCCTGTTTATCA ACAAGAAGAAACCAAACAGATGTCTGGACTCTTTTAAATGGAAGCAAAGATGACTTCCTCAT TATGTAGAAGAAGCCATTAAGATTGCTTACTGTGAAAAGAAATGTGGAAACTGCTCTCACG ACTCTCAAAGATGAAGACTTTTGTAAACGTGTATCTTTGGCTACTGTGGATAAAACAGTTGAA ACTCCATCGCCTCATTACCATCATGAGCATCATCACAATCATGGACATCAGCACCTTGGCAG CAGTGAGCTTTCAGAGAATCAGCAACCAGGAGCACCAAATGCTCCTACTCATCCTGCTCCTC CAGGCCTTCATCACCACCATAAGCACAAGGGTCAGCATAGGCAGGGTCACCCAGAGAACCG AGATATGCCAGCAAGTGAAGATTTACAAGATTTACAAAAGAAGCTCTGTCGAAAGAGATGTAT **AAATCAATTACTCTGTAAATTGCCCACAGATTCAGAGTTGGCTCCTAGGAGCTGATGCTGCC** ATTGTCGACATCTGATATTTGAAAAAACAGGGTCTGCAATCACCTGACAGTGTAAAGAAAACC TCCCATCTTATGTAGCTGACAGGGACTTCGGGCAGAGGAGAACATAACTGAATCTTGTCAG TGACGTTTGCCTCCAGCTGCCTGACAATAAGTCAGCAGCTTATACCCACAGAAGCCAGTGC CAGTTGACGCTGAAAGAATCAGGCAAAAAAGTGAGAATGACCTTCAAACTAAATATTTAAAAT AGGACATACTCCCCAATTTAGTCTAGACACAATTTCATTTCCAGCATTTTTATAAACTACCAAA TTAGTGAACCAAAAATAGAAATTAGATTTGTGCAAACATGGAGAAATCTACTGAATTGGCTTC CAGATTTTAAATTTTATGTCATAGAAATATTGACTCAAACCATATTTTTTATGATGGAGCAACT TAATGAGAATAGAAACGTAAACTATGACCTAGGGGTTTCTGTTGGATAATTAGCAGTTTAGAA TGGAGGAAGAACAAGACATGCTTTCCATTTTTTCTTTACTTATCTCTCAAAACAATATT GAAATACTTAACACGTGAATATTTTGCTAAAAAAGCATATATAACTATTTTAAATATCCATTTAT CTTTTGTATATCTAAGACTCATCCTGATTTTTACTATCACACATGAATAAAGCCTTTGTATCTTT CTTTCTTATCTTTCTCTAATGTTGTATCATACTCTTCTAAAACTTGAGTGGCTGTCTTAAA TGATGGTTTAATAGGTAAACCAAACCCTATAAACCTGACCTCCTTTATGGTTAATACTATTTAA TAAAGCTGACTTCGTTTGTTATGTAGGCTGTATGCATATATTGAAAACAGAAGTGAAACTTTC

# Table 4

NACAGCTGGCGAGTGTACCCGTTTCTGCGAGAGAAGCTAAAGAATGCCCTTGCGTG AGGAAATTAAATTTATGTTCAAGCTAAATGTCGTTTATGGCACTGGGAACACAAGCATTGTCG TAACAAGTTCTGGTGGAAATCCGTACATGGATACGTTCTCTTCTGGGGGGCGGTCTCCAGTCC TTTCTCATGAGGGAGCACACTCCTCTGCCTCATTGCAGTGGCCTCAGGGATATGGAATTAAG GGCTGGCGATCTGGAGTAAAGGATCCTCACATCCACGTGAACCAGGAAACTCTGTGCCCAA ATCGACGAAAAAAAACACTGGGAGAGCCGAACTAAAAGTCTTTTAGCACGGGTACCAGCC CTAGAATTTCCAGTAGACCAGCAGACAGCCGGGAAACCAGATCCTCATCAAAAGACAGAAA GAAAAAATTCGAAGCCAGCCTGAGAAGGGCCCTATTTCAATGCTGTTAACCACTGAGACTG CATCCTCAACAGTGAGACAGGATGGACCAACATACTCAAGCTCAAGGAAACATCTAACACCG GTCGGAAACTCATGGGATCACCGGTACCTAGGATTAGGCCATATAAAGTTTACCGTTACAGA CTGGGCATAGGGACCTAGCTGACAACACGCAGTACCAAGGGCCTTAAAAGCAGCCCAGACC CCCGTCTCGGCACAGGTGCCACATCACGAGACGCTATGGCTAAACCACAGTATAGACGGGC GCCCAAATGAGAGGACACCGGCCGCCTTGGTTGTCACGGCACAAGAGCATCGCCATCAGA AAAGAATGAAACGTACAGAAACTTCAGCAAGTGATCTGCTTTCTTGTGTTGTCTTCTCCTGAC **CNNN** >185

CCTTCTGAGGATGATCGATAGATAAACACCCCCCCTCTGAACCATCCTTGGGCTTCATGGGG TTGGCATTGAGGATCCCTACGACAGTCCCCTGCTCCGTCTTCCAGAGCGCTTTGTGAACTTC TCCAAATAAGAACAAGGACACATTGTGTCAGGTCACGAAGATCATTCAGTTTCCATATGCT GAAGGTTTTTCCACTATTCACACTCTGTGGCGTAACCTTCTTCAATATAACCCCAAATGTCAC CCAATCTATTTCTTCCAGCTTCTCTCTGGCCATCTTTTCCTTGATCTGAGACAGTCTGATCAG TTTTCGGCCGGTCATGTGTCTTCGTTCATATTCTCTGGAGGATACTCGAGCCCGCCTCGAGC CGCAGACCAGGAGAAGGCTTCCACACAGATGGCGATTGAGTCGTTTCCTCACAGAACTTTC ACTCGGGGTCCACCACATATTTGACCTCTAGTTATCCCACTAGGTTTGTTCCGAGAAATCGT CTGTAGGGGTTGGGAGGGTGCACTTGTCATCCTTGAAGATGAGCTTTTGGGATCTGGAGGT GAAGCCTTTGGTGTTCGAGCCACCCTCTTGGTTCTTGGTAGCGCAGGGACATCAAGCTCCG CAGAAAAGCATGTTGACTCCTGAATTCTCTGAACTCTCCTCTCTTAAGAGGTGGCCGGGGA AGCTGCTCTTGTAAGGCCTTCATTTGCTCTTGCAAATTCCTTAATTCCTCTTGCAACTCTTCAT TCGTTTTCTCTCGCCTGGGGGCAGGAGCAGGAGGACCCTATTTTCAGTTGACTGTGATGC GGGAACTTCTTCATCTGTTAAGTCCTCCATATCTCCAAAGAGAGTGGCCAGATTTTCCTT TTCGTCTCTTGTCTCCCTGTTTCTCCATCATCAGCCTCTTCTGTATAAGATTCACCGTCGCC GTCGGCATCAAAGAGCTCATCAAATGCGTCGGGCTCGCCATTTTCCCGCGTCAAGAAGTTAT TTTCTTCTGAATTACAATCCAAGGCTGACTCATTTTCTTCCAGCAGTGCGGTCAGCAGAGACA GATTGTCTTCCTCCTCATCCATGCTGTCAAGAGGACAGTTGTGACAGGAAACTTCGAAGGAG GCTCAGATGCCCAGATGAGCAATGTAGAATCTTGGCCGATGCCGGGACGCCTTCTTCGTTC **ACAGCTGAACCCGCCAAAATCGGACNN** 

NNNNNCTAAACAGCCTGACACTGAGGGGAGGCAGTGAGACTGTAAGCAGTCTGG GTTGGGCAGAAGGCAGAAACCAGCAGAGTCACAGAGGAGATGGCCAACTGCCAAATAGC CATCTTGTACCAGAGATTCCAGAGAGTGGTCTTTGGAATTTCCCAACTCCTTTGCTTCAGTGC CCTGATCTCTGAACTAACAAACCAGAAAGAAGTGGCAGCATGGACTTATCATTACAGCACAA AAGCATACTCATGGAATATTTCCCGTAAATACTGCCAGAATCGCTACACAGACTTAGTGGCC ATCCAGAATAAAAATGAATTGATTACCTCAATAAGGTCCTACCCTACTACAGCTCCTACTAC CCAACGAGGCTGAGAACTGGGCTGATAATGAACCTAACAACAAAAGGAACAACGAGGACTG CGTGGAGATATACATCAAGAGTCCGTCAGCCCCTGGCAAGTGGAATGATGAGCACTGCTTG AAGAAAAAGCACGCATTGTGTTACACAGCCTCCTGCCAGGACATGTCCTGCAGCAAACAAG GAGAGTGCCTCGAGACCATCGGGAACTACACCTGCTCCTGTTACCCTGGATTCTATGGGCC AGAATGTGAATACGTGAGAGAGTGTGGAGAACTTGAGCTCCCTCAACACGTGCTCATGAACT GCAGCCACCCTCTGGGAAACTTCTCTTTTAACTCGCAGTGCAGCTTCCACTGCACTGACGG GTACCAAGTAAATGGGCCCAGCAAGCTGGAATGCTTGGCTTCTGGAATCTGGACAAATAAG CCTCCACAGTGTTTAGCTGCCCAGTGCCCACCCCTGAAGATTCCTGAACGAGGAAACATGAT CTGCCTTCATTCTGCAAAAGCATTCCAGCATCAGTCTAGCTGCAGCTTCAGTTGTGAAGAGG GATTTGCATTAGTTGGACCGGAAGTGGTGCAATGCACAGCCTCGGGGGTATGGACAGCCCC AGCCCCAGTGTAAAGCTGTGCAGTGTCAGCACCTGGAAGCCCCCAGTGAAGGAACCATG GACTGTGTTCATCCGCTCACTGCTTTTGCCTATGGCTCCAGCTGCAAATTTGAGTGCCAGCC CGGCTACAGAGTGAGGGGCTTGGACATGCTCCGCTGCATTGACTCTGGACACTGGTCTGCA CCCTTGCCAACCTGTGAGGCTATTTCGTGTGAGCCGCTGGAGAGTCCTGTCCACGGAAGCA TGGATTGCTCCCATCCTTGAGAGCGTTTCAGTATGACACCAACTGTAGCTTCCGCTGTGCT GAAGGTTTCATGCTGAGAGGAGCCGATATAGTTCGGTGTGATAACTTGGGACAGTGGACAG CACCAGCCCAGTCTGTCAAGCTTTGCAGTGCCAGGATCTCCCAGTTCCAAATGAGGCCCG AATGAAGGCTTGCTCCTGGTGGGAGCAAGTGTGCTACAGTGCTTGGCTACTGGAAACTGGA ATTCTGTTCCTCCAGAATGCCAAGCCATTCCCTGCACACCTTTGCTAAGCCCTCAGAATGGA ACAATGACCTGTTCAACCTCTTGGAAGTTCCAGTTATAAATCCACATGTCAATTCATCTGT GACGAGGGATATTCTTTGTCTGGACCAGAAAGATTGGATTGTACTCGATCGGGACGCTGGA CAGACTCCCCACCAATGTGTGAAGCCATCAAGTGCCCAGAACTCTTTGCCCCAGAGCAGGG CAGCCTGGATTGTTCTGACACTCGTGGAGAATTCAATGTTGGCTCCACCTGCCATTTCTCTT GTAACAACGGCTTTAAGCTGGAGGGGCCCAATAATGTGGAATGCACAACTTCTGGAAGATG GTCAGCTACTCCACCAACCTGCAAAGGCATAGCATCACTTCCTACTCCAGGGGTGCAATGTC CAGCCCTCACCACTCCTGGGCAGGGAACCATGTACTGTAGGCATCATCCGGGAACCTTTGG

#### Table 4

TTTTAATACCACTTGTTACTTTGGCTGCAACGCTGGATTCACACTCATAGGAGACAGCACTCT CAGCTGCAGACCTTCAGGACAATGGACAGCAGTAACTCCAGCATGCAGAGCTGTGAAATGC TCAGAACTACATGTTAATAAGCCAATAGCGATGAACTGCTCCAACCTCTGGGGAAACTTCAG TTATGGATCAATCTGCTCTTTCCATTGTCTAGAGGGCCAGTTACTTAATGGCTCTGCACAAAC AGCATGCCAAGAATGGCCACTGGTCAACTACCGTGCCAACCTGCCAAGCAGGACCATTG **ACTATCCAGGAAGCCCTGACTTACTTTGGTGGAGCGGTGGCTTCTACAATAGGTCTGATAAT** GGGTGGGACGCTCCTGGCTTTGCTAAGAAAGCGTTTCAGACAAAAAGATGATGGGAAATGC CCCTTGAATCCTCACAGCCACCTAGGAACATATGGAGTTTTTACAAACGCTGCATTTGACCC GAGTCCTTAAGGTTTCCATAAACACCCATGAATCAAAGACATGGAATTACCTTAGATTAGCTC TGGACCAGCCTGTTGGACCGCTCTGGACCAACCCTGTTTCCTGAGTTTGGGATTGTGGTA CAATCTCAAATTCTCAACCTACCACCCCTTCCTGTCCCACCTCTTCTCTTCCTGTAACACAAG CCACAGAAGCCAGGAGCAAATGTTTCTGCAGTAGTCTCTGTGCTTTGACTCACCTGTTACTT GAAATACCAGTGAACCAAAGAGACTGGAGCATCTGACTCACAAGAAGACCAGACTGTGGAG AAATAAAAATACCTCTTTATTTTTTGATTGAAGGAAGGTTTTCTCCACTTTGTTGGAAAGCAGG TGGCATCTCTAATTGGAAGAAATTCCTGTAGCATCTTCTGGAGTCTCCAGTGGTTGCTGTTG ATGAGGCCTCTTGGACCTCTGCTCTGAGGCTTCCAGAGAGTCCTCTGGATGGCACCAGAGG CTGCAGAAGGCCAAGAATCAAGCTAGAAGGCCACATGTCACCGTGGACCTTCCTGCCACCA GTCACTGTCCCTCAAATGACCCAAAGACCAATATTCAAATGCGTAATTAAAAGAATTATCCCC AAAAAAAAAAAAAAAAAAAAGATCTTTAATTAAGCGGCCGCAAGCTTN

>190 acccacgcGTCCGGAcgggaGCTgtatgAAAGcggcggAGTTATAGACCGCTAACACCTGTCA CTGGCCACTGGTTTCCCGGAGTTAGCGGCAACGACCTTGCAGCCTGGACACTAGCCAGGC GCTCCCTCTTCTCACAGCGGCCCACGTCTCCTTGCTTGGGAGCCCATCGTCCTGGCTCCGG TGGCCTCGCTGGGTCTCGGGGAAGCAGAGGACTGTTCATTCCTGTGGCGAAAAGCCGGAG TCGGCCTAGACACCCACGACTCGCAGGGTCCATGGTTCCGGAGGCCGTGAGACCTGCCG GGGCTGACAGGTGCCAGGGCCCATGCTGCGGGAGCCTGTGTGCTCAGCCTTCTTGCGGAC GGTAAAGAAGCTAAGTGGAAGAGTGTTTCCTCCTCTGGCCGTAAAGCAGGTACTCTCTGCA GCACCAGCTGTCCCGCCCTACTCCGGACCGCCCCAAAGACTCCATGGGATGGACCTGAG TCAGCCGAATCCCAGCCCCTTCCCTTGGGCCTGCTGTGGTGCTGGACATCAGTGACAGACG GAAGCAGGAGACCATCAAGGCCIACGGGAGGCCCGGGGCGCTTGCGAAGATGAAGTTTGGC TGCCTCTCCTTCCGGCAggcCTTATGCTGGCTTTGTCTTAAATGGAATCAAGACTGTGGAggac CGCGCTGGCGTCCCCTGCTGAGCAGCCAGCGGAACTGTACCATCGCCGTCCACATTGCTCA CAGGGACTGGGAAGGCGATGCCTGGCGGGAGCTGCTGGTGGAGAGACTCGGGATGACTC CTGCTCAGATTCAGGCCTTGCTCAGGAAAGGGGAAAAGTTTGGTCGAGGAGTGATAGCGGG **ACTCGTTGACATTGGGGAAACTTTGCAATGCCCCGAAGACTTAACTCCCGATGAGGTTGTGG AACTAGAAAATCAAGCTGTACCCTGATGCTACAGACGAGGACATCACCTCACACATGGAAAG** 

### Table 4

GTACTCCCTGGAAAGTCCAGCTGAGAAAGCGATCCTGCCCTCTGCTCCCCAGGG
TTACCCTCTGTAAGTCTTCTGCTTAGTGTTCAGAATTGGGGGATGCTGGACTGGGCAAGG
ACTTGTAGGCAACACCCCATAGCCTGCTCATGCCTGTTGGGTTGCCTATGGATCATTCCCTG
CTGGGCTCACTCACCGGCTTCGTATAAGGTCCTTTTTGAGGTTTATTATTTCCTTGTCCATAT
ACTTGATGCTCTCATTGGCTTGTCTGGGACCTGCCTTAGGTTCTCCGAGGCATAAAAGGGC
CGGACAGCCCCCGAGTTGGGGGGAACTCTGAAGCTTCTTGGTGGCTGGAACCTTGGTCATCT
TAAAAATCCTTCAGGTTTTAGCCTGTGCCCCCAAGACAAGGATTTTTCCAGAATCTTCTACTT
CAGTAGTTACTGGTATGAGAAGTTTCGGCAACTTCTCCCTGATCCCCAAGTCCCAATTACAC
GAACTCCAAAGCGGTTTCCTTCTCCCGCGN
>192

>193

>194

>195

ACGCGGGGGATCCGAGTGAGGCGACGGGGTAGGGGTTGGCGCTCAGGCGGCGA CCATGGTGATTGTGATTCATCATCCCTTAATTAAATATCAAATTATATTTGTGTGAAAATGTGA CAAACACACTTATCTGTCTCTTCTACAATTGTGGTTTATTGAATGTGATTTTTCTGCACTAATA TAAATTAGACTAAGTGTTTTCAAATAAATCTAAATCTTCAGCATGATGTTGTGTATAATTGG AGTAGATATTAATTAAGTCACCTGTATAATGTTTTGTAATTTTGCAAAACATATCTTGAGTTGT TTAAACAGTCAAAATGTTTGATATTTTATACCAGCTTATGAGCTCAAAGTACCTCGGCCGCC >197 >198

NACTTGGTGTTTGTCCCCCCGGCGAACACATTTTGGGGTGCGCACACTGGCCCTG GTGGCGCGCTTCTTTTTAGGGGGCCTGTGGCCCACAGACAATGTTCTAACCGGGTAGTGGT GCTCTCTTACCCCGGTGGTCAGATAACCAGGGGGCCAGGGTCCCTTCTTTTGGCCCCTGTA GCACACCCGGTACCCTAAAGCTTGACCCGTTAAAAGCTGTACTTGTAACTGGGTACCTCGTG AACTGTCAAGGAGGCCAGAGCAGGAAAGGGAAAGGAATAACCCCCACCCCCCAACACAA GAGAGGCACAAATTAGAGGGCTGGGCACAGGCTGTAGCCCTGGGTGAGGGGGTAAGCAGC TTGACAGTTGCTCTGTGGTCTCTGGGATATAATTCTGCCCAAGGCTAGAACCACAGAGAAGA GTTTGCACTCTTAAGTCCAGGAAGGGGACCCTAGGAACCACAGGCAGACTCT TTAGCACACTAAACACATGGCCAGGACCCTAGGGACACAAGGCAGCTGGAGAGTGGGATCT CTTGTTAAATGGCATGGTAGGCAGATTAGAGTCCTGGCTATAATCCCTAGGGCCCCCAATCCT

# Table 4

**AGTAGTTACGTGCTAACCAACACATTACCCTGAGGCTTCTGGGAGAACAAGAGCCCTGAGG** AAGAAGCAGTAAGACCAGGCATGAGAAAACCCAGAAAGCCAGCTCAGTTCCCAAGAAGGCT GGCACATGGGGCCTGAGAATTCTTAAATGGCCATTGTCACTGGTACTTGCTCAGCCTTTCCA GGCCCCTCTGATGAGCTCTCTAATCAGCAGGACCAAGGTGTGAAGTGGGAATGAACATGGA TCCATCCCATTGGATGGAGAAGAAGGTGGACAGCCTGTTCGTCTCTCATGTCAGCCTAGG GCTGGGAACAGTTTGTGAGGACTTATCTGTTGTACCTGCCAAAAGTTAATTAGTAACTCACC GTCGAGAGTGAATTAACAGGACAAACGTAATCCAACATGCCAGTGTGGGTAGGACACAGTT CCCTAATCAGCCCTTGGCCCCCAGATGCAGGCTCTCCCCTCCCCTCTGAGACCTCTCTGGG AATAGCAGACAAGAGAATGTCAGGGCAGAAACCTGCTGGACTAGGCTCTCAGCAGCCCAGC TCCTCCTGGGGGAATCCCCCAGAATTCCTCACTGTGTGACACAGTTTTCTCCCATGTCCTG GGCATATCTGTCTGACATGGTGGTCCTTAAGTCCTCAATGTCACGACGCAGCTGTTGAACCT CTTCTAGTTTCCTCTTGATCACATCTGGCTTCTGCAAATCTAGCTGAGTCTCTGGGTGCTGTG AGTGAATGCCCAGGAGCAGGGAGAGATTGGGGTCATGGCCCTGGGCCCTCTGGGTCACAA TGCTACAGACAGCCTGCAGATCTTGAAGGCAACTGGCCAACTCCTGGTGCAGCTCAAGTGC CAGCTGGGCCGTGTCTGGTGAAGGTGGAGACCCTGGTTGGGCCTGGCGCAGGTGTTCCTG GAGTGTCAGATTCTCCAATCAAGTCCTGGTTTTGCACTGAAAGCTCCTTTCACGGCTGTG CGCAGCTGCTGCAGGGCTGAATCCCTTCGCTGGGCCTCCTCTCTCAGGGCCTGGCTTGTTC CTTCTTCTTGAGCCACTTCCTGCTCTAGGCTCTGTACTTGTGAGCGCAACTGATCCATCTTCT GCTGCTGCTTCTCCACAATCTTTTGGAGCGAATCGTATCGCTTCTGCCAGGACTCCATTTCC ACTTCTGGACCTTCTCCACTGGTCTCCTCCACAGACTGTTTATCTTGCAGGCTATGTCCAGC TTGCCTGGGTCTCCTCCAGCAAACTCTCCAGCTCAGTCACTTTCTCCTGCAGCTCTGTGCTC TTCAACTCAGAATCCTTAAGCTATATTTAATTTCCTCAGCAAGGCAATTTTTACTTTCTGCAGA **AAGGGTGCTCCTCGCAGATGGAACAAN** >199

NACTTGGTGTTTTGTCCCCCCGGCGAACACATTTTGGGGTGCGCACACTGGCCCTG GTGGCGCGCTTCTTTTTAGGGGGCCCTGTGGCCCACAGACAATGTTCTAACCGGGTAGTGGT GCTCTCTTACCCCGGTGGTCAGATAACCAGGGGCCCAGGGTCCCTTCTTTTGGCCCCTGTA GCACACCCGGTACCCTAAAGCTTGACCCGTTAAAAGCTGTACTTGTAACTGGGTACCTCGTG AACTGTCAAGGAGGCCAGAGCAGGAAAGGGAAAGGAATAACCCCCACCCCCCAACACACA GAGAGGCACAAATTAGAGGGCTGGGCACAGGCTGTAGCCCTGGGTGAGGGGGTAAGCAGC TTGACAGTTGCTCTGTGGTCTCTGGGATATAATTCTGCCCAAGGCTAGAACCACAGAGAAGA GTTTGCACTCTTAAGTCCAGGAAGGGGACTACCTGGAAGGCCTGAGAACAAAGGAAAAGT TTAGCACACTAAACACATGGCCAGGACCCTAGGGACACAAGGCAGCTGGAGAGTGGGATCT CTTGTTAAATGGCATGGTAGGCAGATTAGAGTCCTGGCTATAATCCCTAGGGCCCCAATCCT AGTAGTTACGTGCTAACCAACACATTACCCTGAGGCTTCTGGGAGAACAAGAGCCCTGAGG AAGAAGCAGTAAGACCAGGCATGAGAAAACCCAGAAAGCCAGCTCAGTTCCCAAGAAGGCT GGCACATGGGGCCTGAGAATTCTTAAATGGCCATTGTCACTGGTACTTGCTCAGCCTTTCCA GGCCCTCTGATGAGCTCTCTAATCAGCAGGACCAAGGTGTGAAGTGGGAATGAACATGGA TCCATCCCATTGGATGGAGAAGAAGGTGGACAGCCTGTTCGTCTCATGTCAGCCTAGG GCTGGGAACAGTTTGTGAGGACTTATCTGTTGTACCTGCCAAAAGTTAATTAGTAACTCACC GTCGAGAGTGAATTAACAGGACAAACGTAATCCAACATGCCAGTGTGGGTAGGACACAGTT CCCTAATCAGCCCTTGGCCCCCAGATGCAGGCTCTCCCCTCCCCTCTGAGACCTCTCTGGG **AATAGCAGACAAGAGAATGTCAGGGCAGAAACCTGCTGGACTAGGCTCTCAGCAGCCCAGC** TCCTCCCTGGGGGAATCCCCCAGAATTCCTCACTGTGTGACACAGTTTTCTCCCATGTCCTG GGCATATCTGTCTGACATGGTGGTCCTTAAGTCCTCAATGTCACGACGCAGCTGTTGAACCT CTTCTAGTTTCCTCTTGATCACATCTGGCTTCTGCAAATCTAGCTGAGTCTCTGGGTGCTGTG **AGTGAATGCCCAGGAGCAGGGAGAGATTGGGGTCATGGCCCTGGGCCCTCTGGGTCACAA** TGCTACAGACAGCCTGCAGATCTTGAAGGCAACTGGCCAACTCCTGGTGCAGCTCAAGTGC CAGCTGGGCCGTGTCTGGTGAAGGTGGAGACCCTGGTTGGGCCTGGCGCAGGTGTTCCTG GAGTGTCAGATTCTTCTCAATCAAGTCCTGGTTTTGCACTGAAAGCTCCTTTCACGGCTGTG CGCAGCTGCTGCAGGGCTGAATCCCTTCGCTGGGCCTCCTCTCAGGGCCTGGCTTGTTC CTTCTTCTTGAGCCACTTCCTGCTCTAGGCTCTGTACTTGTGAGCGCAACTGATCCATCTTCT GCTGCTGCTTCTCCACAATCTTTTGGAGCGAATCGTATCGCTTCTGCCAGGACTCCATTTCC ACTTCTGGACCTTCTCCACTGGTCTCCTCCACAGACTGTTTATCTTGCAGGCTATGTCCAGC GGAGGAGAATTCTGCTTCTCTCTCCCCCAGGCTTTCCAGTTGAATCTCCTTCTCTCTGCAGA

TTGCCTGGGTCTCCCAGCAAACTCTCCAGCTCAGTCACTTTCTCCTGCAGCTCTGTGCTC
TTCAACTCAGAATCCTTAAGCTATATTTAATTTCCTCAGCAAGGCAATTTTTACTTTCTGCAGA
AAGGGTGCTCCTCGCAGATGGAACAAN
>200

NNATGTGGTTACGACCCACTGTATTGAGGTGACGCGATCCATAGGCTGTGGTGTTT GTTTTCGCTGATCCACACAACGTTGGGGCACTGTCTATTCATGTGTTCAAGCTGAAGGCTC GTTCTCGGTTGTCATTTTACAGTGTTTTTCTACGGGGTTACATTACAGGAATGTTGTAGCGAC GTTTAGCCCGTGGAGTATCAACGTCTTGAGACTCCGTGTGAGACTCCCTGGTTTGTTCCACA ACAGTGTGTTTTTAGATTCCGTACCTTTGATTAAGGAACACATCATGCCGTGAAGCCAATTTA TATTCTGCAATTCCGTAGTGCATGTAATGTATTCTGCCGTCTCGTAGTGTGAAGCCATGCTTG GCACATCCAGTTCTTTGATGTCTGGCTGCCTTCTGCGGGCCAACTGTCTTGTGGAATTCGTT GCTCCCAGAGATAGCTTGAACTGCAGATCCCGCACAGCATTGCACTGAGCTGTCGTTGTATC TGAGCCTGGACATGGCGGCCGAGGTACTCACAGTCACGCAAATTCACAGTCTGCGTGCACG GCTCTCCATTCTTCTTGGCTTTACAGGTTCCCAGGTCAAGAGCTTCACCCATAATTAAGA CCTTCTGAGGATGATCGATAGATAAACACACCTCCTCTGAACCATCCTTGGGCTTCATGGGG TTGGCATTGAGGATCCCTACGACAGTCCCCTGCTCCGTCTTCCAGAGCGCTTTGTGAACTTC TCCAAATAAGAACAAGGACACACTTGTGTCAGGTCACGAAGATCATTCAGTTTCCATATGCT GAAGGTTTTCCACTATTCACACTCTGTGGCGTAACCTTCTTCAATATAACCCCAAATGTCAC CCAATCTATTTCTTCCAGCTTCTCTCTGGCCATCTTTTCCTTGATCTGAGACAGTCTGATCAG TTTTCGGCCGGTCATGTGTCTTCGTTCATATTCTCTGGAGGATACTCGAGCCCGCCTCGAGC CGCAGACCAGGAGAAGGCTTCCACACAGATGGCGATTGAGTCGTTTCCTCACAGAACTTTC ACTCGGGGTCCACCACATATTTGACCTCTAGTTATCCCACTAGGTTTGTTCCGAGAAATCGT CTGTAGGGGTTGGGAGGTGCACTTGTCATCCTTGAAGATGAGCTTTTGGGATCTGGAGGT GAAGCCTTTGGTGTTCGAGCCACCCTCTTGGTTCTTGGTAGCGCAGGGACATCAAGCTCCG CAGAAAAGCATGTTGACTCCTGAATTCTCTGAACTCTCCTCTCCTTAAGAGGTGGCCGGGGA GACTTCTCAGGGGATTTTTGCAGACGGGCTGGGCTTGCTGTTCAATTGTTGTTACTTTT AGCTGCTCTTGTAAGGCCTTCATTTGCTCTTGCAAATTCCTTAATTCCTCTTGCAACTCTTCAT TCGTTTTCTCTCGCCTGGGGGCAGGAGCAGGAGCCCTATTTTCAGTTGACTGTGATGC GGGAACTTCTTCATCTGTTAAGTCCTCCATATCTCCAAAGAGAGTGGCCAGATTTTCCTT TTCGTCTCTTGTCTCCCTGTTTCTCCATCATCAGCCTCTTCTGTATAAGATTCACCGTCGCC GTCGGCATCAAAGAGCTCATCAAATGCGTCGGGCTCGCCATTTTCCCGCGTCAAGAAGTTAT TTTCTTCTGAATTACAATCCAAGGCTGACTCATTTTCTTCCAGCAGTGCGGTCAGCAGAGACA GATTGTCTTCCTCCTCATCCATGCTGTCAAGAGGACAGTTGTGACAGGAAACTTCGAAGGAG GCTCAGATGCCCAGATGAGCAATGTAGAATCTTGGCCGATGCCGGGACGCCTTCTTCGTTC **ACAGCTGAACCCGCCAAAATCGGACNN** 

>201

qqAqTCGACCCACGCGTCCGATCATGTGACACGGAAGTAGCTCCGAACAGGAAGAG GACGAAAAAATAACCGTCCGCGACGCCGAGACAAACCGGACCCGCAACCACCATGAACAG CAAAGGTCAATATCCAACACAGCCAACCTACCCTGTGCAGCCTCCTGGGAATCCAGTATACC CTCAGACCTTGCATCTTCCTCAGGCTCCACCCTATACCGATGCTCCACCTGCCTACTCAGAG CTCTATCGTCCGAGCTTTGTGCACCCAGGGGCTGCCACAGTCCCCACCATGTCAGCCGCAT TTCCTGGAGCCTCTCTGTATCTTCCCATGGCCCAGTCTGTGGCTGTTGGGCCTTTAGGTTCC ACAATCCCCATGGCTTATTATCCAGTCGGTCCCATCTATCCACCTGGCTCCACAGTGCTGGT GGAAGGAGGTATGATGCAGGTGCCAGATTTGGAGCTGGGGCTACTGCTGGCAACATTCCT CCTCCACCTCCTGGATGCCTCCCAATGCTGCTCAGCTTGCAGTCATGCAGGAGCCAACG TCCTCGTAACTCAGCGGAAGGGGAACTTCTTCATGGGTGGTTCAGATGGTGGCTACACCAT CTGGTGAGGAACCAAGGCCACCTTTGTGCCGGGAAAGACATCACATACCTTCAGCACTTCT CACAATGTAACTGCTTTAGTCATATTAACCTGAAGTTGCAGTTTAGACACATGTTGTTGGGGT GTCTTTCTGGTGCCCAAACTTTCAGGCACTTTTCAAATTTAATAAGGAACCATGTAATGGTAG **AAGCCGCCTAAGGATTTTCCTTTAATTTCTCTGGAGTAATACTGTACCATACTGGTCTTTGC** TTTTAGTAATAAACATCAAATTAGGTTTGGAGGGAACTTTGATCTTCCTAAGAATTAAAGTTG CCAAATTATTCTGATTGGTCTTTAATCTCCTTTAAGTCTTTGATATATTACTTGTTATAAAATG TAGTCTTCCATTTCCTCCCGCCAGTCTCCATTGAATCAATGGTGCAGGACAGAAGCCAGTC

# Table 4

AGACTAATTTCCTTCTTCCTCGCACTTCTCCCCACTCGTCATCTTTTAACTAGTGTTTCACAA GGATCCTCTGAAACCCTCTCTGTGCCCCAAGTACAGATCCCATTACTTCTGCTTTCGTATCTC CTCAGGCAAAAGTGGAGGGTGCCTTATGGGCCCTCCTCATAGGTTGTCTCTGCATACACGA ACCTAACCCAAATTTGCTTTGGTGCCAGAAAAACTGAGCTATGTTTGAACAAAGATGTCGTG CAAACTGTACTGTGAACAACAGTTGGTTTAAAATATGAGGGGCAAGGAGGAGGATGCATTTC AAAAGCTTGATTGATGTTCAGAGCTAAATTAAGAGGAGTTTTCAGATCAAAAACTGGTTAC CATTTTTTGTCAGAGTGTCTGATGCGGCCACTCATTCGGCTCCCCAGAATTCCTAGACTGGG TTAATAGGGTCATATTGTGAATGTCTCACTACAAAATGACTTGAGTCCAGTGAAATCTCATTA GGGTTTAAGAATATTTCAGGGATCCCTAATGTTTTGATTTTTGTTTTCTGAAATTGGATTTTAT TTTATTTTATCTTATAATTTCAGTTCATCTAAATTGTGTGTTCTGTACATGTGATGTTTGACTGT TGTGGAATTTTTATACTAAAAATGTAGAATAAAGACTATTTTGAAGATTTGAAAAAACAAAAAA AAAAACttcqqaGGATCCaaTGtcqqqqqqaaacaaqqqqtattqaactgqcccatggtcaaaggctgttccggacCCA GTttttgtcccaaggggaaatactgcggcgcccataaagagaggccgaataaattggaaaagc >203 >204

NNATGTGGTTACGACCCACTGTATTGAGGTGACGCGATCCATAGGCTGTGGTGTTT

GTTTTCGCTGATCCACACAAACGTTGGGGCACTGTCTATTCATGTGTTCAAGCTGAAGGCTC GTTCTCGGTTGTCATTTTACAGTGTTTTTCTACGGGGTTACATTACAGGAATGTTGTAGCGAC GTTTAGCCCGTGGAGTATCAACGTCTTGAGACTCCGTGTGAGACTCCCTGGTTTGTTCCACA ACAGTGTGTTTTTAGATTCCGTACCTTTGATTAAGGAACACATCATGCCGTGAAGCCAATTTA TATTCTGCAATTCCGTAGTGCATGTAATGTATTCTGCCGTCTCGTAGTGTGAAGCCATGCTTG GCACATCCAGTTCTTTGATGTCTGGCTGCCTTCTGCGGGCCAACTGTCTTGTGGAATTCGTT GCTCCCAGAGATAGCTTGAACTGCAGATCCCGCACAGCATTGCACTGAGCTGTCGTTGTATC TGAGCCTGGACATGGCGGCCGAGGTACTCACAGTCACGCAAATTCACAGTCTGCGTGCACG GCTCTCCATTCTTCTTCTTGGCTTTACAGGTTCCCAGGTCAAGAGCTTCACCCATAATTAAGA CCTTCTGAGGATGATCGATAGATAAACACACCTCCTCTGAACCATCCTTGGGCTTCATGGGG TTGGCATTGAGGATCCCTACGACAGTCCCCTGCTCCGTCTTCCAGAGCGCTTTGTGAACTTC TCCAAATAAGAACAAGGACACATTGTGTCAGGTCACGAAGATCATTCAGTTTCCATATGCT GAAGGTTTTTCCACTATTCACACTCTGTGGCGTAACCTTCTTCAATATAACCCCAAATGTCAC CCAATCTATTTCTTCCAGCTTCTCTCGGCCATCTTTTCCTTGATCTGAGACAGTCTGATCAG TTTTCGGCCGGTCATGTGTCTTCGTTCATATTCTCTGGAGGATACTCGAGCCCGCCTCGAGC CGCAGACCAGGAGAGGCTTCCACACAGATGGCGATTGAGTCGTTTCCTCACAGAACTTTC **ACTCGGGGTCCACCACATATTTGACCTCTAGTTATCCCACTAGGTTTGTTCCGAGAAATCGT** CTGTAGGGGTTGGGAGGGTGCACTTGTCATCCTTGAAGATGAGCTTTTGGGATCTGGAGGT GAAGCCTTTGGTGTTCGAGCCACCCTCTTGGTTCTTGGTAGCGCAGGGACATCAAGCTCCG CAGAAAAGCATGTTGACTCCTGAATTCTCTGAACTCTCCTCTCTTAAGAGGTGGCCGGGGA

**ACAGCTGAACCCGCCAAAATCGGACNN** 

### Table 4

TGAGCCTGGACATGGCGGCCGAGGTACTCACAGTCACGCAAATTCACAGTCTGCGTGCACG GCTCTCCATTCTTCTTCGGCTTTACAGGTTCCCAGGTCAAGAGCTTCACCCATAATTAAGA CCTTCTGAGGATGATCGATAGATAAACACACCTCCTCTGAACCATCCTTGGGCTTCATGGGG TTGGCATTGAGGATCCCTACGACAGTCCCCTGCTCCGTCTTCCAGAGCGCTTTGTGAACTTC TCCAAATAAGAACAAGGACACACTTGTGTCAGGTCACGAAGATCATTCAGTTTCCATATGCT GAAGGTTTTTCCACTATTCACACTCTGTGGCGTAACCTTCTTCAATATAACCCCAAATGTCAC CCAATCTATTTCTTCCAGCTTCTCTCTGGCCATCTTTTCCTTGATCTGAGACAGTCTGATCAG TTTTCGGCCGGTCATGTGTTCTTCGTTCATATTCTCTGGAGGATACTCGAGCCCGCCTCGAGC CGCAGACCAGGAGAAGGCTTCCACACAGATGGCGATTGAGTCGTTTCCTCACAGAACTTTC ACTCGGGGTCCACCACATATTTGACCTCTAGTTATCCCACTAGGTTTGTTCCGAGAAATCGT CTGTAGGGGTTGGGAGGGTGCACTTGTCATCCTTGAAGATGAGCTTTTGGGATCTGGAGGT GAAGCCTTTGGTGTTCGAGCCACCCTCTTGGTTCTTGGTAGCGCAGGGACATCAAGCTCCG CAGAAAAGCATGTTGACTCCTGAATTCTCTGAACTCTCCTCTCTTAAGAGGTGGCCGGGGA GACTTCTCAGGGGATTTTTGCAGACGGGCTGGGCTTGCTGTTTAATTGTTGTTACTTTT AGCTGCTCTTGTAAGGCCTTCATTTGCTCTTGCAAATTCCTTAATTCCTCTTGCAACTCTTCAT TCGTTTTCTCTCGCCTGGGGGCAGGAGCAGGAGCCCTATTTTCAGTTGACTGTGATGC GGGAACTTCTTCATCTGTTAAGTCCTCCATATCTCCAAAGAGAGTGGCCAGATTTTCCTT TTCGTCTCTTGTCTCCTGTTTCTCCATCATCAGCCTCTTCTGTATAAGATTCACCGTCGCC GTCGGCATCAAAGAGCTCATCAAATGCGTCGGGCTCGCCATTTTCCCGCGTCAAGAAGTTAT TTTCTTCTGAATTACAATCCAAGGCTGACTCATTTTCTTCCAGCAGTGCGGTCAGCAGAGACA GATTGTCTTCCTCCTCATCCATGCTGTCAAGAGGACAGTTGTGACAGGAAACTTCGAAGGAG GCTCAGATGCCCAGATGAGCAATGTAGAATCTTGGCCGATGCCGGGACGCCTTCTTCGTTC ACAGCTGAACCCGCCAAAATCGGACNN >206

NNATGTGGTTACGACCCACTGTATTGAGGTGACGCGATCCATAGGCTGTGGTGTTT **GTTTTCGCTGATCCACACAAACGTTGGGGCACTGTCTATTCATGTGTTCAAGCTGAAGGCTC** GTTCTCGGTTGTCATTTTACAGTGTTTTTCTACGGGGTTACATTACAGGAATGTTGTAGCGAC GTTTAGCCCGTGGAGTATCAACGTCTTGAGÁCTCCGTGTGAGACTCCCTGGTTTGTTCCACA ACAGTGTTTTTTAGATTCCGTACCTTTGATTAAGGAACACATCATGCCGTGAAGCCAATTTA TATTCTGCAATTCCGTAGTGCATGTAATGTATTCTGCCGTCTCGTAGTGTGAAGCCATGCTTG GCACATCCAGTTCTTTGATGTCTGGCTGCCTTCTGCGGGCCAACTGTCTTGTGGAATTCGTT GCTCCCAGAGATAGCTTGAACTGCAGATCCCGCACAGCATTGCACTGAGCTGTCGTTGTATC TGAGCCTGGACATGGCGGCCGAGGTACTCACAGTCACGCAAATTCACAGTCTGCGTGCACG **GCTCTCCATTCTTCTTCGGCTTTACAGGTTCCCAGGTCAAGAGCTTCACCCATAATTAAGA** CCTTCTGAGGATGATCGATAGATAAACACACCTCCTCTGAACCATCCTTGGGCTTCATGGGG TTGGCATTGAGGATCCCTACGACAGTCCCCTGCTCCGTCTTCCAGAGCGCTTTGTGAACTTC TCCAAATAAGAACAAGGACACATTGTGTCAGGTCACGAAGATCATTCAGTTTCCATATGCT GAAGGTTTTTCCACTATTCACACTCTGTGGCGTAACCTTCTTCAATATAACCCCAAATGTCAC CCAATCTATTTCTTCCAGCTTCTCTCTGGCCATCTTTTCCTTGATCTGAGACAGTCTGATCAG TTTTCGGCCGGTCATGTGTCTTCGTTCATATTCTCTGGAGGATACTCGAGCCCGCCTCGAGC CGCAGACCAGGAGAAGGCTTCCACACAGATGGCGATTGAGTCGTTTCCTCACAGAACTTTC ACTCGGGGTCCACCACATATTTGACCTCTAGTTATCCCACTAGGTTTGTTCCGAGAAATCGT CTGTAGGGGTTGGGAGGTGCACTTGTCATCCTTGAAGATGAGCTTTTGGGATCTGGAGGT GAAGCCTTTGGTGTTCGAGCCACCCTCTTGGTTCTTGGTAGCGCAGGGACATCAAGCTCCG CAGAAAAGCATGTTGACTCCTGAATTCTCTGAACTCTCCTCTCCTTAAGAGGTGGCCGGGGA AGCTGCTCTTGTAAGGCCTTCATTTGCTCTTGCAAATTCCTTAATTCCTCTTGCAACTCTTCAT TCGTTTTCTCTCGCCTGGGGGCAGGAGCAGGAGCACCCTATTTTCAGTTGACTGTGATGC GGGAACTTCTTCATCTGTTAAGTCCTCCATATCTCCAAAGAGAGTGGCCAGATTTTCCTT TTCGTCTCTTGTCTCCTGTTTCTCCATCATCAGCCTCTTCTGTATAAGATTCACCGTCGCC **GTCGGCATCAAAGAGCTCATCAAATGCGTCGGGCTCGCCATTTTCCCGCGTCAAGAAGTTAT** TTTCTTCTGAATTACAATCCAAGGCTGACTCATTTTCTTCCAGCAGTGCGGTCAGCAGAGACA GATTGTCTTCCTCCTCATCCATGCTGTCAAGAGGACAGTTGTGACAGGAAACTTCGAAGGAG GCTCAGATGCCCAGATGAGCAATGTAGAATCTTGGCCGATGCCGGGACGCCTTCTTCGTTC **ACAGCTGAACCCGCCAAAATCGGACNN** 

>207

CGCGGTGGCGGCCGGCAGGTACATGGTTCTTCCTCAGAAAGTGGTTCTTCCT TAATGTGTTTCTTTTACCCCTTTTCTTCTTCTTCTCACAGATGTTTCTTCTTCTTCTCCACACT TTTTCTTCTTCTTCTTCAACTGAATAGGGTAAGTGTAAAGGCACAACAAATTAACACTGTA TCAGATCTCATTCCTTCCAAAAACGTTTGAGTCCTAGTTTTTTTCTGTCATTCTCATCAACTAC CCAATGTTTGTTTATTTTATAATTGGGAAGGTTCTCCAAGGCCTACCACTAACTTTAAC GAATGATATAGATAGAGCTCAGAGCAATCTTCTCACGATCATGAAGTCATGTATAAAAATCAG GATTAAAACAAAGGTCATCTGATCTCCAATCATTATTGGGAAGAAAGTCAATTATATTAGAAAT GGTTAAGAGCTTGCACTCTGAAGTCAGACGGCCTGGGTTTAATCTACCTGCTGCAACCCTGA AAAATTGTATTTACCCTTGGTGAAGCTCCCTATCTATAAAACTTAAGAATGTCTTATCTTACTG GACTGTTACTGATTTAAAAAGATGATGCATAGAAAGCACTAAGTATAATGCTTAGCACACATT ACAATAAGGACTCAACACATAGCTATCATTAGACATTCAGTGACCAGCTGGGTGCAGTGGCT CACGCCTGTAATCTCAGCACTTTGGGAGGCTGAGGCGGGAGGATCACTTGAGGTCAGGATA TCAAGACCAGCCTGGCCAACATGGTGAAATCCTGTATCTAATAAAAATACAAAAAGTTAGCT AGGCATGGTGGTGCATGCCTGTAATCCCAGTTATTCAGGAGGCTGAAGCACGAGAATTGCT TGAACCCAGGAGGCGGAGGCTGCAGTCAGCCAAGATCACGCCACTGCACTTCAGCCTGGG >208

CGCGGTGGCGGCCGGCAGGTACATGGTTCTTCCTCAGAAAGTGGTTCTTCCT TAATGTGTTTCTTTTACCCCTTTTCTTCTTCTTCTCACAGATGTTTCTTCTTCTTCTGCCACT TTTTCTTCTTCTTCAACTGAATAGGGTAAGTGTAAAGGCACAACAAATTAACACTGTA TCAGATCTCATTCCTTCCAAAAACGTTTGAGTCCTAGTTTTTTTCTGTCATTCTCATCAACTAC CCAATGTTTGTTTTGTTTATTTTATAATTGGGAAGGTTCTCCAAGGCCTACCACTAACTTTAAC GAATGATATAGATAGAGCTCAGAGCAATCTTCTCACGATCATGAAGTCATGTATAAAAATCAG GATTAAAACAAAGGTCATCTGATCTCCAATCATTATTGGGAAGAAAGTCAATTATTAGAAAT GGTTAAGAGCTTGCACTCTGAAGTCAGACGGCCTGGGTTTAATCTACCTGCTGCAACCCTGA AAAATTGTATTTACCCTTGGTGAAGCTCCCTATCTATAAAACTTAAGAATGTCTTATCTTACTG GACTGTTACTGATTTAAAAAGATGATGCATAGAAAGCACTAAGTATAATGCTTAGCACACATT ACAATAAGGACTCAACACATAGCTATCATTAGACATTCAGTGACCAGCTGGGTGCAGTGGCT CACGCCTGTAATCTCAGCACTTTGGGAGGCTGAGGCGGGAGGATCACTTGAGGTCAGGATA TCAAGACCAGCCTGGCCAACATGGTGAAATCCTGTATCTAATAAAAATACAAAAAAGTTAGCT AGGCATGGTGGTGCATGCCTGTAATCCCAGTTATTCAGGAGGCTGAAGCACGAGAATTGCT TGAACCCAGGAGGCGGAGGCTGCAGTCAGCCAAGATCACGCCACTGCACTTCAGCCTGGG >209

NNGTCGCCATTGTGACCCGAGAATTTAATATACTTGTGCCCCGCGCGTGTTTTGTTA ACCGTCCGCCCGAGTGTCCCCTCAATTTCTACCCCTCGCCCCTTAACCCAAAGCTAAATCCA CCATCTGGTATTCTCCCCTAGAGCACCAGATGACCATCTGAAGCTGGACAAGTGTCTCTAAC GGGACAAACAGCCAACTGACTCTACCCACTTGGTGAGAAGTGATATACTTCAACTATTTTTTT **AATGCTTCTGAAAGTTTCTTGGCCCACAGAGGACTAGGGTGCAATCATTCCCTGTGTTAGTG** AGTTGGGTTTAATGCAGCTTCAAAATTAGGGTAAAGGGACTTGGTGAAATGTTTACATTAAAT ATTTCACTCCTACCCATTCTTCAGGAAAAAAGGTGAGCTCAGCAAGGCTGGATGCCATTAAG AGATATTTACTGTTTTCTTTTTCTATAGCTAAAAAAGCAAACTTTACACGAAGAAGCTCTTGAT TAAGGAAATTTCAATAGATTCATATTTATAAAATTTTAAACATTTGGCACAGCAAAATTTGGAA AAAATGGGGGAAAAAAATAGGTCTGGTTGTTGTCCCCCTTTTTCCACCTGCTGCTGGACAG TGATGAGATGCTCACAGAAGAAAAAGGCCTGGCTTTGTACCAGGCTGGCGACAGGTGCTAC CAGGAGTGGGCTGAGGGGAGAAAACTATCTCCCACTCTTTTGGCCCAGGCAATGTCAACG **ACTTCCACATTCCTGGCCCACTTCCTGAGCAACCCCAGGTTCGGCTCTGTATAAGGACCCT** GCAATCAAAGGAAACAGTTAAACACCAAACAATTTCTTAAAGCCAAAAAAATATTTTTCATGGA GTTGAACATTTTTCGAGTGTTTTTTTCAAGTGTAAAAGCAGTGACATTTTGTTCAAACAGAA GCAGCATCTAGGAATTCTGGCACTTGGGTTCTAGGGGGTTACAGGTATGCATCATGGATTCT TCTCCCTCGTATTTAAAAAGGCCTCGTGTTTCTATTCCTGAGTTCATACCAACACCTGCTAGC TCTCCCCTCTAGCGGACAGTGGGTGGCCAGCCAGCCTCCCTGGTTAGATTGGGCAATGCCA AGCAGACATCCCTCATTCACCTGCTGGGCTTGCTTTCTGATTCAGAGGTAAGTCGAAGTGCA

GAGAAAGAAACTTACAAAAGCACAACCACCAAAGGCAGCCTGAACGGGGAGCCCTGTGCAG AATTTGAATCAAACATGGGGGGGGGCACCTGCCAAGCAATAGTATGATGGACTCAAGTCATC ACTCAGTATATAAAGTTTGCTTAGGCTAAGGTGGAGTCAGAAATGTCTCTAATTGTAGACACC ATCTCTGTGCCACCCTTCCTCTCATCGGATATGGAGTGATTTCTTCTCTCGCTGCTGCGACG CAGATCTGAGCCACAGTCAGGTACCAATGTACACGACATAGGCACATGTGCAAACACAAAGA AGGTGGGCTGCTTCTTTCTCTCTGCCCCTAGTCCAGGCTCCTTTGCTTCACGTAAGATT AACACTTTCCCATTCCTCTGAAGTTGCTGGAAGGACATTTCCCAGGAAGAAACAATTCCTCA CTGCCTATAAACTGTAGTCTCATGTGGGATAGTCAATTGAACATGAGAATCAGAACAATCTG CATCCACTTGTACCCCCAGCTACCTCCCATGTTTCCAGGTATCATTGGCTCTTAACTCCCACA AGCCTGCCTTTTGGCTACCCATCCCAACAATATCAAGAGGGAATGACTAAGTATCAGCTAGA AACTTAGCCATGTCTCAACATTCCTGGATTATCTGAAAAGCTGTCGATGCCCTTTTACAGGTT TATGGTGACAGACCCGTATCATCTTAAAGTATGTTCATAGTTAAGGCTTGACTTAAGAAAATA AGAGAACCAGACATAATGGAAAGACCTCTTCAATAATGTTGTCATGCCTCTCAGTGAACGTG CTCACAGTCACACTTGGTTTGGCTCCCCAAACCCACAATAGAAAAGGAAAAATGAGTATTTT GTTTTTCATCTGTTTTGTATTTAAAGGCATTGGGTTACTTCCTCCTGCCCTCTTTTCTTCCCTG AACAAGAGTTTACAACTCCTCATGGCTTCTTAATAGGTGAAGTAGGTGAAAAGTCTGAGAAG CTCACAGCAGGGTTTGCCGTCCCAACTATGCAGCTGAGAGGTCGCCAGCTCCTGTGCCTTC CCAGCCCCACTATAATTGGCAGTATGTTTGTTCATGTTTCCTGAAAACATTTTCTTTAAAAAG TCCTTCCCTGAAATAATTATAAAGAAGCATTTCAGGCAAAATACTTAGTATTAATGGTCTCTTA GGGACCAAAAAGTATCTTGGCCCTTTGGGAGTTTCCTTGTCAGAAAGTATAAGCCTCAACAG AAGTGTGTTCATATCCCACCTAATTTACAACAGAAGATAACCCCCATCCCCAAAACATA AAAATACAAGTCTATGCCCATAGAACN >210

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### Table 4

TCGTTTTCTCCCCTGGGGGCAGGAGCAGGAGCACCTATTTTCAGTTGACTGTGATGC
GGGAACTTCTTCATCTGTTAAGTCCTCCATATCTCCAAAGAGAGTGGCCAGATTTTCCTT
TTCGTCTCTTGTCTCCTGTTTCTCCATCATCAGCCTCTTCTGTATAAGATTCACCGTCGCC
GTCGGCATCAAAGAGCTCATCAAATGCGTCGGGCTCGCCATTTTCCCGCGGTCAAGAAGTTAT
TTTCTTCTGAATTACAATCCAAGGCTGACTCATTTTCTTCCAGCAGTGCGGTCAGCAGAGACA
GATTGTCTTCCTCCTCATCCATGCTGTCAAGAGGACAGTTGTGACAGGAAACTTCGAAGGAG
GCTCAGATGCCCAGATGAGCAATGTAGAATCTTGGCCGATGCCGGGACGCCTTCTTCGTTC
ACAGCTGAACCCGCCAAAATCGGACNN
>211

NNATGTGGTTACGACCCACTGTATTGAGGTGACGCGATCCATAGGCTGTGGTGTTT GTTTTCGCTGATCCACACAACGTTGGGGCACTGTCTATTCATGTGTTCAAGCTGAAGGCTC GTTCTCGGTTGTCATTTTACAGTGTTTTTCTACGGGGTTACATTACAGGAATGTTGTAGCGAC GTTTAGCCCGTGGAGTATCAACGTCTTGAGACTCCGTGTGAGACTCCCTGGTTTGTTCCACA ACAGTGTGTTTTTAGATTCCGTACCTTTGATTAAGGAACACATCATGCCGTGAAGCCAATTTA TATTCTGCAATTCCGTAGTGCATGTAATGTATTCTGCCGTCTCGTAGTGTGAAGCCATGCTTG GCACATCCAGTTCTTTGATGTCTGGCTGCCTTCTGCGGGCCAACTGTCTTGTGGAATTCGTT GCTCCCAGAGATAGCTTGAACTGCAGATCCCGCACAGCATTGCACTGAGCTGTCGTTGTATC TGAGCCTGGACATGGCGGCCGAGGTACTCACAGTCACGCAAATTCACAGTCTGCGTGCACG GCTCTCCATTCTTCTTGGCTTTACAGGTTCCCAGGTCAAGAGCTTCACCCATAATTAAGA CCTTCTGAGGATGATCGATAGATAAACACACCTCCTCTGAACCATCCTTGGGCTTCATGGGG TTGGCATTGAGGATCCCTACGACAGTCCCCTGCTCCGTCTTCCAGAGCGCTTTGTGAACTTC TCCAAATAAGAACAAGGACACACATTGTGTCAGGTCACGAAGATCATTCAGTTTCCATATGCT GAAGGTTTTTCCACTATTCACACTCTGTGGCGTAACCTTCTTCAATATAACCCCAAATGTCAC CCAATCTATTTCTTCCAGCTTCTCTCGGCCATCTTTTCCTTGATCTGAGACAGTCTGATCAG TTTTCGGCCGGTCATGTGTCTTCGTTCATATTCTCTGGAGGATACTCGAGCCCGCCTCGAGC CGCAGACCAGGAGAAGGCTTCCACACAGATGGCGATTGAGTCGTTTCCTCACAGAACTTTC ACTCGGGGTCCACCACATATTTGACCTCTAGTTATCCCACTAGGTTTGTTCCGAGAAATCGT CTGTAGGGGTTGGGAGGGTGCACTTGTCATCCTTGAAGATGAGCTTTTGGGATCTGGAGGT GAAGCCTTTGGTGTTCGAGCCACCCTCTTGGTTCTTGGTAGCGCAGGGACATCAAGCTCCG CAGAAAAGCATGTTGACTCCTGAATTCTCTGAACTCTCCTCCTTAAGAGGTGGCCGGGGA GACTTCTCAGGGGATTTTTGCAGACGGGCTGGGCTTGCTGTTTAATTGTTGTTACTTTT AGCTGCTCTTGTAAGGCCTTCATTTGCTCTTGCAAATTCCTTAATTCCTCTTGCAACTCTTCAT TCGTTTTCTCTCGCCTGGGGGCAGGAGCAGGAGCCCTATTTTCAGTTGACTGTGATGC GGGAACTTCTTCATCTGTTAAGTCCTCCATATCTCCAAAGAGAGTGGCCAGATTTTCCTT TTCGTCTCTTGTCTCCTGTTTCTCCATCATCAGCCTCTTCTGTATAAGATTCACCGTCGCC GTCGGCATCAAAGAGCTCATCAAATGCGTCGGGCTCGCCATTTTCCCGCGTCAAGAAGTTAT TTTCTTCTGAATTACAATCCAAGGCTGACTCATTTTCTTCCAGCAGTGCGGTCAGCAGAGACA GATTGTCTTCCTCATCCATGCTGTCAAGAGGACAGTTGTGACAGGAAACTTCGAAGGAG GCTCAGATGCCCAGATGAGCAATGTAGAATCTTGGCCGATGCCGGGACGCCTTCTTCGTTC **ACAGCTGAACCCGCCAAAATCGGACNN** >212

>213 >214

CGCGGTGGCGGCCGAGGTACATGCCTACAGATAGTCCCAGCTACTCGGGAGGCTG

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>218 NATACTGTTCAAAAATTGGCCTCCGACCACAAAGACATCCACAGCAGTGTTTCTCGG GTTGGAAAAGCCATTGGATAAGGATTCACTTTAAGAGATTTGGAAACTCTTCCCTTTGGAATT AGCTGTCTGTCTTGATTGGACGTCAGGATCTTTCCAAGCAGGCCTGCGAAGGAAACTTAC CCAAAGGGAAGTCTGTGCTCTCATCAGATGTTCCTTCAGGAACAGAAACTGAGGAGGAAGAT GACGGCATGAATGACATGAATCACGAGGTCATGTCATTAATATGGAGTGAAGATTTAAGGGT GCAGGATGTGCGAAGGCTTCTTCAGAGTGCGCATCCTGTCCGTGTCAATGTAGTGCAGTAC CCAGAGCTCAGTGACCACGAGTTCATCGAGGAAAAGGAAAACAGATTGCTCCAATTGTGTCA GCGAACTATGGCTCTTCCTGTAGGACGAGGAATGTTTACCTTGTTTCGTACCATCCTGTTC CAACAGAGCCATTGCCTATTCCTAAATTGAATCTGACTGGGCGTGCCCCTCCTCGGAACACA ACAGTAGACCTTAATAGTGGAAACATCGATGTGCCTCCCAACATGACAAGCTGGGCCAGCTT TCATAATGGTGTGGCTGGCCTGAAGATAGCTCCTGCCTCCCAGATCGACTCAGCTTGG ATTGTTTACAATAAGCCCAAGCATGCTGAGTTGGCCAATGAGTATGCTGGCTTTCTCATGGC TCTGGGTTTGAATGGGCACCTTACCAAGCTGGCGACTCTCAATATCCATGACTACTTGACCA AGGGCCATGAAATGACAAGCATTGGACTGCTACTTGGTGTTTCTGCTGCAAAACTAGGCACC ATGGATATGTCTATTACTCGGCTTCTTAGCATTCGCATTCCTGCTCTCTTACCCCCAACGTCC ACAGAGCTGGATGTTCCTCACAATGTCCAAGTGGCTGCAGTGGTTGGCCTTGTATA TCAAGGGACAGCTCACAGACATACTGCAGAAGTCCTGTTGGCTGAGATAGGACGGCCTCCT GGTCCTGAAATGGAATACTGCACTGACAGAAAGTCATACTCCTTAGCTGCTGGCCTTGGCCCT GGGCATGGTCTGGGGGCATGGCAGCAATTTGATAGGTATGTCTGATCTCAATGTGCCT GAGCAGCTCTATCAGTACATGGTTGGAGGACATAGGCGCTTTCAAACAGGAATGCATAGGG AGAAACATAAATCACCAAGTTATCAAATCAAAGAAGAGAGATACCATAAATGTGGATGTGACTT GTCCAGGTGCTACTCTAGCTTTGGCTATGATCTACATAAAAACCAATAACAGTGTCTTCTAGG AAGCCCAGACACATGGAGAAGTTCTGAGTGTTTTTGGCCGATAGTCCCAGATGAGGTTCCAG CAACAGCTGGGATCACCCATGAGATGTGAGGGAAGGCTTTGAGATGGTTTCAGCCCTA GCCACCACTGACCTCATAAGAGACCACAAGAATGAGAATCACCTGGCCAAGCCCAGCAGAC NNNNN

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### Table 4

ACCTGCTGTTTGGCCAATTTATCCTACAGGTCTTGGACGGTGGGACCTCTTCAGAGAAGATC TGGTAAGGTCAGCACAGTGGCCATGGAAAAAGAAAACTCTACAGCATATTTCCGAGGA TCAAGGACAAGTCCAGAACGAGATCCTCTCATTCTTCTGTCTCGGAAAAACCCAAAACTTGTT GATGCAGAATACACCAAAAACCAGGCCTGGAAATCTATGAAAGATACCTTAGGAAAGCCAGC TGCTAAGGATGTCCATCTTGTGGATCACTGCAAATACAAGTATCTGTTTAATTTTCGAGGCGT AGCTGCAAGTTTCCGGTTTAAACACCTCTTCCTGTGTGGCTCACTTGTTTTCCATGTTGGTGA TGAGTGGCTAGAATTCTTCTATCCACAGCTGAAGCCATGGGTTCACTATATCCCAGTCAAAA CAGATCTCTCCAATGTCCAAGAGCTGTTACAATTTGTAAAAGCAAATGATGATGTAGCTCAAG TACTGGGAGAACCTCTTGAGTGAATACTCTAAATTCCTGTCTTATAATGTAACGAGAAGGAAA GGTTATGATCAAATTATTCCCAAAATGTTGAAAACTGAACTATAGTAGTCATCATAGGACCAT AGTCCTCTTTGTGGCAACAGATCTCAGATATCCTACGGTGAGAAGCTTACCATAAGCTTGGC ACCTATACCTTGAATATCTGCTATCAAGCCAAATACCTGGTTTTCCTTATCATGCTGCACCCA GAGCAACTCTTGAGAAAGATTTAAAATGTGTCTAATACACTGATATGAAGCAGTTCAACTTTT TGGATGAATAAGGACCAGAAATCGTGAGATGTGGATTTTGAACCCAACTCTACCTTTCATTTT CTTAAGACCAATCACAGCTTGTGCCTCAGATCATCCACCTGTGTGAGTCCATCACTGTGAAA TTGACTGTGTCCATGTGATGATGCCCTTTGTCCCATTATTTGGAGCAGAAAATTCGTCATTTG GAAGTAGTACAACTCATTGCTGGAATTGTGAAATTATTCAAGGCGTGATCTCTGTCACTTTAT TTTAATGTAGGAAACCCTATGGGGTTTATGAAAAATACTTGGGGATCATTCTCTGAATGGTCT AAGGAAGCGGTAGCCATGCCATGCAATGATGTAGGAGTTCTCTTTTGTAAAACCATAAACTC TGTTACTCAGGAGGTTTCTATAATGCCACATAGAAAGAGGCCAATTGCATGAGTAATTATTGC AATTGGATTTCAGGTTCCCTTTTTGTGCCTTCATGCCCTACTTCTTAATGCCTCTCTAAAGCC ACTAAAAAATAAAATAAGACTCGAGGGGGGGCCCGGTACCCCAATTTGCCCTATTATGGGG **CGGATTACAAATTAACTGGCCCGGCGTTTTTACAANNNN** >221

NGGCGGCCGAGCTGCCGAGGTACGCGGGACAACAGTCCCCAGGCATCACCATTCA AGATGCATCCAGGGGTCCTGCCTTCCTCTTCTTGAGCTGGACTCATTGTCGGGCCCT GCCCTTCCCAGTGGTGATGATGAAGATGATTTGTCTGAGGAAGACCTCCAGTTTGCAGAG CGCTACCTGAGATCATACTACCATCCTACAAATCTCGCGGGAATCCTGAAGGAGAATGCAGC AAACTTGACGATAACACCTTAGATGTCATGAAAAAGCCAAGATGCGGGGTTCCTGATGTGGG TGAATACAATGTTTTCCCTCGAACTCTTAAATGGTCCAAAATGAATTTAACCTACAGAATTGTG **AATTACACCCTGATATGACTCATTCTGAAGTCGAAAAAGGCATTCAAAAAAGCCTTCAAAGTT** TGGTCCGATGTAACTCCTCTGAATTTTACCAGACTTCACGATGGCATTGCTGACATCATGATC TCTTTTGGAATTAAGGAGCATGGCGACTTCTACCCATTTGATGGGCCCTCTGGCCTGCTGGC TCATGCTTTTCCTCCTGGGCCAAATTATGGAGGAGATGCCCATTTTGATGATGATGAAACCT **GGACAAGTAGTTCCAAAGGCTACAACTTGTTTCTTGTTGCTGCGCATGAGTTCGGCCACTCC** TTAGGTCTTGACCACTCCAAGGACCCTGGAGCACTCATGTTTCCTATCTACACCTACACCGG CAAAAGCCACTTTATGCTTCCTGATGACGATGTACAAGGGATCCAGTCTCTATGGTCCAG CTTGATGCCATTACCAGTCTCCGAGGAGAAACAATGATCTTTAAAGACAGATTCTTCTGGCG CCTGCATCCTCAGCAGGTTGATGCGGAGCTGTTTTTAACGAAATCATTTTGGCCAGAACTTC CCAACCGTATTGATGCTGCATATGAGCACCCTTCTCATGACCTCATCTTCATCTTCAGAGGTA TGGGTCTTCCAAAAGAAGTTAAGAAGATAAGTGCAGCTGTTCACTTTGAGGATACAGGCAAG **ACTCTCCTGTTCTCAGGAAACCAGGTCTGGAGATATGATGATACTAACCATATTATGGATAAA** GACTATCCGAGACTAATAGAAGAAGACTTCCCAGGAATTGGTGATAAAGTAGATGCTGTCTA TGAGAAAAATGGTTATATCTATTTTTCAACGGACCCATACAGTTTGAATACAGCATCTGGAG TAACCGTATTGTTCGCGTCATGCCAGCAAATTCCATTTTGTGGTGTTAAGTGTCTTTTTAAAA ATTGTTATTTAAATCCTGAAGAGCATTTGGGGTAATACTTCCAGAAGTGCGGGGTAGGGGAA GAAGAGCTATCAGGAGAAAGCTTGGTTCTGTGAACAAGCTTCAGTAAGTTATCTTTGAATATG TAGTATCTATATGACTATGCGTGGCTGGAACCACATTGAAGAATGTTAGAGTAATGAAATGGA **GGATCTCTAAAGAGCATCTGATTCTTGTTGCTGTACAAAAGCAATGGTTGATGATACTTCCCA** CACCACAAATGGGACACATGGTCTGTCAATGAGAGCATAATTTAAAAAATATTTATAAGGAA **ATTTTACAAGGGCATAAAGTAAATACATGCATATAATGAATAAATCATTCTTACTAAAAAGTAT** 

NAGGGAGTCCCACCCACGTGTCCGCGCAAGACGCCTCGTAGGGAGTGTAACTATG GCCGGCCTGCGGAACGAAAGTGAACAGGAGCCGCTCTTAGGCGACACACCTGGAAGCAGA GAATGGGACATTTTAGAGACTGAAGAGCATTATAAGAGCCGATGGAGATCTATTAGGATTTT ATATCTTACTATGTTTCTCAGCAGTGTAGGGTTTTCTGTAGTGATGATGTCCATATGGCCATA TCTCCAAAAGATTGATCCGACAGCTGATACAAGTTTTTTGGGCTGGGTTATTGCTTCATATAG TCTTGGCCAAATGGTAGCTTCACCTATATTTGGTTTATGGTCTAATTATAGACCAAGAAAAGA GCCTCTTATTGTCTCCATCTTGATTTCCGTGGCAGCCAACTGCCTCTATGCATATCTCCACAT CCCAGCTTCTCATAATAAATACTACATGCTGGTTGCTCGTGGATTGTTGGGAATTGGAGCAG GAAATGTAGCAGTTGTTAGATCATATACTGCTGGTGCTACTTCCCTTCAGGAAAGAACAAGC TGTAAACAAATATTTTTCTTATCATTTTGCCTTTGCTCATGATGTTCTCATTACCTATAGTTTCT CTTCTGTTCTCATCTTCATCCTTCAAGATTCAGTTTAAACCAGGTGTGGTGGCACGTGC CTGTAATACCAGCTACTCGGGAGACTGAGGTAGCAGAATCTCTTGAGCCCAGGAGTTCGAG GGCAGNCTGGGTAACATAGGGAGACTCCATCTTAAAAAAAACATCACTGGGCGCGGTTTAC AACGTCGTGACTGGGGAAACCCGGGGGTACCAAATTAACGGCTGGGGAGAATCCCCCTTG GCAGAGGGGAAAGGAAAGGCGCCAAGTGCCCCCCAAAGGGCCCCCAGAGAAGAGAC AGAGGGACCATGTCAGGCCCCCCCTAGGGGCCCCCTAACACCACACGGGGGCCCCCCCT CCAAAACCCCGCGCTCGCGCCCAGACACCCCCCCAGGGCCACCCGCGGCCGCCACCC >223

ACGCGGGGGGACGTAAGGTGGGGCGGTGAAAGAAGTTTGCTGACGAAGATGGC CTGCAGTTTTGTGATCTGCAATGATTCTTCCCTTCGAGGTCAGCCCATTATCTTTAATCCTGA CTTTTTTGTGGAGAAACTCCGACATGAGAAACCTGAGATTTTCACTGAGTTGGTGGTCAGCA ATATCACAAGGCTCATCGATTTACCTGGAACTGAGTTGGCTCAGCTGATGGGGGAAGTGGA CCTTAAGTTGCCTGGCGGGCTGGCCCAGCATCAGGATTCTTCCGGTCTCTCATGTCTCTC AAGCGAAAGGAAAAAGGAGTGATATTTGGGTCCCCACTGACGGAGGAAGGCATTGCCCAGA GGTAATAGTGTCCGACAGCAGATTTTAAGGGATGCTCTCAATAATGGAACTGACATTGACTT GGAATCAGGGGAATTTCACTCAAATGATGTTGCCACTTTGCTGAAGATGTTTCTAGGAGAGT TGCCGGAGCCTCTGCTGACACATAAACACTTCAATGCACACCTCAAAATCGCTGATTTGATG CAGTTTGATGATAAAGGAAACAAGACCAATATACCAGACAAGGACCGGCAAATTGAGGCTCT CCAGTTGCTCTCCTCATTCTCCCTCCTCCTAATCGTAATTTGCTGAAGTTATTGCTTGATCT CCTATACCAGACAGCAAAGAAACAAGACAAGAACAAGATGTCAGCCTATAACCTTGCCCTTA TGTTTGCACCCCACGTCCTGTGGCCAAAAAATGTCACTGCAAATGACCTTCAGGAGAATATC ACAAAGTTAAACAGTGGGATGGCTTTTATGATTAAACACTCCCAGAAACTTTTTAAGGCTCCT GCTTATATTCGGGAGTGTGCGAGATTGCACTATTTGGGATCCAGAACTCAGGCATCAAAGGA TGACCTTGACCTCATAGCTTCATGTCATACTAAGTCCTTTCAGCTGGCAAAGTCTCAGAAACG GAACCGGGTAGATTCCTGCCCTCACCAGGAGGAGCCCAGCACCATACGGAAGAGGCACT GAGAGAGCTGTTTCAACACGTTCATGATATGCCAGAGTCAGCAAAGAAGAACAACTTATTA GACAGTTTAATAAGCAATCATTGACCCAGACACCAGGGCGAGAACCTTCTACTTCCCAGGTA CAAAAGAGGGCTCGTTCGCGCTCCTTCAGTGGGCTTATTAAGCGGAAGGTCCTGGGAAATC

# Table 4

AGATGATGTCAGAAAAGAAAAGAAGAACCCTACTCCAGAATCTGTGGCCATTGGTGAATTG AAGGGAACCAGCAAAGAAAATAGGAACTTATTATTTTCTGGCTCTCCAGCTGTCACGATGAC ACCAACAAGATTGAAGTGGTCTGAAGGGAAGAAGAGGGGAAAAAAGGATTTCTCTGAAGG ATCCAGAGTTGTCTCCTATGGTCCATGCAGAATTTTCTGTTTAGTGGGCAGGTGTTATTCCTG CCCACAGCAAAGCTTGGACTTGCAGCTTGCTTGCTGCATTTTGAATTGTCAAAGCCAACTAA TACCGTGACCCGACTGATACCTCTAACCCCACTCACTGGATGATGTTTGCAAGCTGTGCCTT CACTTTTGAAAAAAATATGAAATGTGTGCTCAACTGCCAGTAATTTTTTAAAAAAGCACTGTCC CAGTGGATTGATGTTTTTAATGGATATTTTGGGTTTTTCTCTGTTTTGATAGTATTGGGTA AGATATCTTTCCCTCTTTTTCACTTTGAGCTTTGGGAAAACTCTTTATCTTATGAGGCTGTATT CCTCAATACCTAATTTGTGTCCAAAGAATTTATAGCTCTTCTGGACATTTTTTATTATTTCTTG GGTGTGACATCAGAGTATTTGACCTGCAGTATTGAAAAAGGAGAATTCAGAATGATACAGTA TCTCTCTCTTTCCTCAGTGATGTGAAAATAATTGTGTTTTGCTGAACTTGTTATCTTC ATTCAATTCCTCTTGACTAAAACATCTCTGGTGCCAACGTAATACTTCTGAACCACATCACT GTGACTCAAGGAAAGTCACTGACAGCATAAGAGAAGTTTGCTAAAATATTTGTATGTGGGGG **AAGCTCTGGAGTGTGCCTAGGAGGGGGCTGGCTTTATGTCCCAGGATGACTCTTTAT** GGGTGGGATTACATTGCACCCTCTGAGGGTGCAGGCTAGACCGTCTCCTGAGAGGAAGTTA GGATCAGAAAGAAGCAAGCAGCAGCCTCTGCAGGGCTGACAGGATTTAAAGGAGAAA TGTTCTTATTTGGAAGCAGCTGTGGCTTGTCACCAATGTTCAAGGAGTGTTACTGTTCCGCC CTCTCTTTGTCAGAAGGGACACAGGTGGTAATTTGGAGATGGGGCCAGAGCTTCTGGCTTTT GGATTTGGTGTTCACTTGTGTTGGATAGAGCAGTGGCATGGCTTTGACCTAGTATGAACT GGTGTCTGCCCAGAGAGCAGCATGTAGCAGGGGGGGAATGCTCAGGTTTGTGCCTGGCTCT **GTGGAGCTGTACAACCCTTCTCACCCTGTGGGTTGGAGCCGAGTCAGGCCACTATGGGGAA** GCAGTTGCCCCACAAAATGTGGTTTGCTGACCTATTTCTAAACTGTTGAATATGCTGCACCAT TGCTGAAATGAAAGATGACTCTGGGGGAGCAGAGCTTGGCCTTGTGCCCAGCTGGCAGCCC CCTCTGCCAGCCTTTCTGCTGCTTTTGCTGCTGTAACAGCAATAGTGGAGAAAAATGTAAAAT TTGGTCTTCCAGCTTAATGCAGTGTGAACAATAGATGGTTAGGAAAACAAAACTGCTTAGAA TAGGTTTCTATTCAATATTTGACTTTTTTTTTTTTTTATTAAGAAAATGAAATCCCTTACACCAGAT **ATCAGTTAATTCAAACAGAAAACCCTTTGGGTATCANNNNN** >224

agtcgactcacgcgtCCGGGAAGCGGGGTGGGAAgaagGgAGGGGATGGGGTTGACCGAG CTGGAGĂAĂGCCTTGAACTCTATCATCGACGTCTACCACAĀGTACTCCCTGATAAAGGGGAA TTTCCATGCCGTCTACAGGGATGACCTGAAGAAATTGCTAGAGACCGAGTGTCCTCAGTATA TCAGGAAAAAGGGTGCAGACGTCTGGTTCAAAGAGTTGGATATCAACACTGATGGTGCAGTT **AACTTCCTGGAGTTCCTCATTCTGGTGATAAAGATGGGCGTGGCAGCCCACAAAAAAAGCCA** TGAAGAAAGCCACAAAGAGTAGCTGAGTTACTGGGCCCAGAGGCTGGGCCCCTGGACATGT ACAGACTCTCATTTTATGACGTATCCTACTGCATCAGGACATTTGTGTCAATGTCAGGTGACG AGGGGAAATGAAAGTGATGAGACGATGAGAGGAGTGAAATACCAAGGACGCCATACTAGGA **AACCCAGGTCTATTTGTTATCAGAGTAAGGATCAAGCCAGATAGCCTGTTATGTAATTTCTCC** GATAAAAGATTTTGAAAGCAGGTGCTGTGGGCATCTGTATGGGGAATCGCACTCATAGAATT ATTTTCATTTGTAAATATTTGGTATCAggCCAAGCAAGGAAAGAAGCTTTACTgtaTTACCATC TTTccTqqaaaAGATTGATTTTTCTCTCCCttaggGGATATGAggTATGATACCTGCaaccAAAAT **AAGCTGgctgttaaGTGCTCTCTCCTTAACTATTGTCCAAGCAATGTACATCACTCTTGCCTAGAT** GAGTGACCATACTTTTTTCTTTGCTGCTTGGTTTTTCTATCACTAAAAAGCAAATTTAGGTGGA **AGATGGATGGGTAAGTCCTTTGTCCTTGTCAAAAGAATTTAGAAAGGGTAAAGGTGGTGGGA** CTTGGGAATTTTTGAAGGAATTTAAGAGCTGTACTTATTTTAAATAATGAGGAAACAATCAGA GAGACTTAACCAGGGTGGCAACTATGGAAGAGTGGGGGTAGAATCCAAGTCTACAGTTCTA CGGCACTGCTTTGTTTATTTTTCAATCAAGCACACATGAGGGATTGCTTAATAAATTCAAGA GTTTCTATATAGTTTGGGATTACTACAGACACAGGTACTCTAGCCATGTGACTATTTCAGAT TAGTGTTCCCATTGCTCCATCCTATTTTTCATATCTAAATGTGTCATGATTTTAGAATCTCT TTGTAAAGAAACCAAAAAGAGCCATGCCCAAAAGAATGAGCATGAAATGAAGCAATTCAAG

NNATGTGGTTACGACCCACTGTATTGAGGTGACGCGATCCATAGGCTGTGGTGTTT GTTTTCGCTGATCCACACAACGTTGGGGCACTGTCTATTCATGTGTTCAAGCTGAAGGCTC GTTCTCGGTTGTCATTTTACAGTGTTTTTCTACGGGGTTACATTACAGGAATGTTGTAGCGAC GTTTAGCCCGTGGAGTATCAACGTCTTGAGACTCCGTGTGAGACTCCCTGGTTTGTTCCACA ACAGTGTGTTTTTAGATTCCGTACCTTTGATTAAGGAACACATCATGCCGTGAAGCCAATTTA TATTCTGCAATTCCGTAGTGCATGTAATGTATTCTGCCGTCTCGTAGTGTGAAGCCATGCTTG GCACATCCAGTTCTTTGATGTCTGGCTGCCTTCTGCGGGCCAACTGTCTTGTGGAATTCGTT GCTCCCAGAGATAGCTTGAACTGCAGATCCCGCACAGCATTGCACTGAGCTGTCGTTGTATC TGAGCCTGGACATGGCGGCCGAGGTACTCACAGTCACGCAAATTCACAGTCTGCGTGCACG GCTCTCCATTCTTCTTCGCCTTTACAGGTTCCCAGGTCAAGAGCTTCACCCATAATTAAGA CCTTCTGAGGATGATCGATAGATAAACACACCTCCTCTGAACCATCCTTGGGCTTCATGGGG TTGGCATTGAGGATCCCTACGACAGTCCCCTGCTCCGTCTTCCAGAGCGCTTTGTGAACTTC TCCAAATAAGAACAAGGACACACTTGTGTCAGGTCACGAAGATCATTCAGTTTCCATATGCT GAAGGTTTTTCCACTATTCACACTCTGTGGCGTAACCTTCTTCAATATAACCCCAAATGTCAC CCAATCTATTTCTTCCAGCTTCTCTCGGCCATCTTTTCCTTGATCTGAGACAGTCTGATCAG TTTTCGGCCGGTCATGTGTCTTCGTTCATATTCTCTGGAGGATACTCGAGCCCGCCTCGAGC CGCAGACCAGGAGAAGGCTTCCACACAGATGGCGATTGAGTCGTTTCCTCACAGAACTTTC ACTCGGGGTCCACCACATATTTGACCTCTAGTTATCCCACTAGGTTTGTTCCGAGAAATCGT CTGTAGGGGTTGGGAGGTGCACTTGTCATCCTTGAAGATGAGCTTTTGGGATCTGGAGGT GAAGCCTTTGGTGTTCGAGCCACCCTCTTGGTTCTTGGTAGCGCAGGGACATCAAGCTCCG CAGAAAAGCATGTTGACTCCTGAATTCTCTGAACTCTCCTCTCTTAAGAGGTGGCCGGGGA AGCTGCTCTTGTAAGGCCTTCATTTGCTCTTGCAAATTCCTTAATTCCTCTTGCAACTCTTCAT TCGTTTTCTCTCGCCTGGGGGCAGGAGCAGGGAGCCCTATTTTCAGTTGACTGTGATGC GGGAACTTCTTCATCTGTTAAGTCCTCCATATCTCCAAAGAGAGTGGCCAGATTTTCCTT TTCGTCTCTTGTCTCCCGTTTCTCCATCATCAGCCTCTTCTGTATAAGATTCACCGTCGCC GTCGGCATCAAAGAGCTCATCAAATGCGTCGGGCTCGCCATTTTCCCGCGTCAAGAAGTTAT TTTCTTCTGAATTACAATCCAAGGCTGACTCATTTTCTTCCAGCAGTGCGGTCAGCAGAGACA GATTGTCTTCCTCCTCATCCATGCTGTCAAGAGGACAGTTGTGACAGGAAACTTCGAAGGAG GCTCAGATGCCCAGATGAGCAATGTAGAATCTTGGCCGATGCCGGGACGCCTTCTTCGTTC **ACAGCTGAACCCGCCAAAATCGGACNN** 

ACGCGGATGGATAGCCGCTTGCAGGAGATCCGGGAGCGGCAGAAGTTACGGCGA CAGCTCCTCGCGCAGCAGTTGGGAGCTGAAAGTGCCGACAGCATTGGTGCCGTGTTAAATA GCAAAGATGAGCAGAGAAATTGCTGAAACAAGAGAAACTTGCAGGGCTTCCTATGATACC TCTGCTCCAAATGCAAAACGTAAGTATCTGGATGAAGGAGAGACAGATGAGGACAAAATGGA AGAATATAAGGATGAACTAGAAATGCAACAGGATGAAGCTTATCATCAATTCATTGTATAAAA ATAAAGAGATTTTCCTGAGAGAACTGATTTCAAATGCTTCTGATGCTTTAGATAAGATAAGGC TAATATCACTGACTGATGAAAATGCTCTTTCTGGAAATGAGGAACTAACAGTCAAAATTAAGT GTGATAAGGAGAAGAACCTGCTGCATGTCACAGACACCGGTGTAGGAATGACCAGAGAAGA

# Table 4

NNCGCTAGCTTGGACGGTTTGGCTGCCAGAGCCTGCCAAGAGACAGGCTTGC AGCCCGCCCTTTTCCTCCAGCCCAGCCCTGGTTTAAGTCCCCGCCCTCCCATCCCCACTC TTCAGCTGCCCTGGACCCACCCCAAATGACAGAAAGGGCTCACTGAAGGCCTTGACGCTTC GAAATTTGCTAATATGCAGCAGTTGATCCCCAGGCTACTCAAGGACGCAGATAGTAAACTCT GAACCCTGCTTCAGTTGCGAGATTTTTTAAAACGGTCGAATAAATCTTCAAGAAATAGAAGCT CTAAATCTTCCAAACAGCCTAGATTGTAAAGGCGGCCGACACTACAACTCCTAGCATGCCCA GCAACCGGACCTTCACTTGGAGTTGGCGCTCTGCCCGCTGGGAACTGTAGTCCTTGTTGGT TGCGGTCCCACCTAACGCCGAGGTCCTCTTCATTGTTCAAGCTGGTCTTTCGGGGCACGCC TGCGCAGTGGGCAAGCTGGAAAAGCGTGTGGGTGAGAACCTCGCACAACCCCTTTTCATTG **TCTGTGTGTGGCGCCTGCGCAGTAAGGGATCGTTGGAACTGGGCAGGAGGGGATAGGGTC** CGGCTCCTCGCCCTTTCCCGAGGCGCCTGCGCACTAGGCAGTCGGTCTTTGCCGTTACCGC TATGTGTGGGGCGTGTGGGAATAACGTTATTGCCCAGCGGAGCTGAGGGCCCCGGAGCT GACGGCGTGCGAGAGACTCACGGGACGCGCGCCCCGCCTCCCCGTCCGGTCCCTC TCTCCACGGTAAGGGGATGACGTAGCTTTGCCAAAGACTTAGAAGCTAAGCAGAAAATGAG CTTAACATCCTGGTTTTTGGTGAGCAGTGGAGGCACTCGCCACAGGCTGCCACGAGAAATG ATTTTTGTTGGAAGAGATGACTGTGAGCTCATGTTGCAGTCTCGTAGTGTGGATAAGCAACA CGCTGTCATCAACTATGATGCGTCTACGGATGAGCATTTAGTGAAGGATTTGGGCAGCCTCA ATGGGACTTTTGTGAATGATGTAAGGATTCCGGAACAGACTTATATCACCTTGAAACTTGAAG **ATAAGCTGAGATTTGGATATGATACAAATCTTTTCACTGTAGTACAAGGAGAAATGAGGGTCC** CTGAAGAAGCTCTTAAGCATGAGAAGTTTACCATTCAGCTTCAGTTGTCCCAAAAATCTTCAG AATCAGAATTATCCAAATCTGCAAGTGCCAAAAGCATAGATTCAAAGGTAGCAGACGCTGCT **ACTGAAGTGCAGCACAAAACTACTGAAGCACTGAAATCCGAGGAAAAAGCCATGGATATTTC** TGCTATGCCCCGTGGTACTCCATTATATGGGCAGCCGTCATGGTGGGGGGGATGATGAGGTG GATGAAAAAAGAGCTTTCAAGACAAATGGCAAACCTGAAGAAAAAAACCATGAAGCTGGAAC **ATCAGGGTGCAGCATAGATGCCAAGCAAGTTGAGGAACAATCTGCAGCTGCAAATGAAGAA** GTACTTTTTCCTTTCTGTAGGGAACCAAGTTATTTTGAAATCCCTACAAAAGAATTCCAGCAA CCATCACAAATAACAGAAAGCACTATTCATGAAATCCCAACAAAAGACACGCCAAGTTCCCAT ATAACAGGTGCAGGGCATGCTTCATTTACCATTGAATTTGATGACAGTACCCCAGGGAAGGT **AACTATTAGAGACCATGTGACAAAGTTTACTTCTGATCAGCGCCACAAGTCCAAGAAGTCTTC** TCCTGGAACTCAAGACTTGCTGGGGATTCAAACAGGAATGATGGCACCCGAAAACAAAGTTG CTGACTGGCTAGCACAAACCACCCTCCTCAAATGCTATGGGAAAGAACAGAAGAGGATTCT AAAAGCATTAAAAGTGATGTTCCAGTGTACTTGAAAAGGTTGAAAGGAAATAAACATGATGAT **GGTACGCAAAGTGATTCAGAGAACGCTGGGGCTCACAGGCGCTGTAGCAAACGTGCAACTC** TTGAGGAACACTTAAGACGCCACCATTCAGAACACAAAAAGCTACAGAAGGTCCAGGCTACT GAAAAGCATCAAGACCAAGCTGTTACTAGCTCTGCGCATCACAGAGGGGGGCATGGTGTTC CACATGGGAAATTGTTAAAACAGAAATCAGAGGAGCCATCGGTGTCAATACCCTTCCTACAA ACTGCATTATTAAGAAGTTCAGGGAGTCTTGGGCACAGACCAAGCCAGGAGATGGATAAAAT GTTAAAAAATCAAGCAACTTCTGCTACTTCTGAAAAGGATAATGATGATGACCAAAGTGACAA GGGTACTTATACCATTGAGTTAGAGAATCCCAACAGTGAGGAAGTGGAAGCAAGAAAAATGA TTGACAAGGTGTTTGGAGTAGATGACAATCAGGATTATAATAGGCCTGTTATCAACGAAAAAC CCACTGACTACATCTGGATTTCACCACTCAGAGGAAGGCACATCTTCATCTGGAAGCAAACG TTGGGTTTCACAGTGGGCTAGTTTGGCTGCCAATCATACAAGGCATGATCAAGAAGAAAAGGA TAATGGAATTTTCTGCACCTCTTCCTTTAGAGAATGAGACAGAGATCAGTGAGTCTGGCATG ACAGTGAGAAGTACTGGCTCTGCAACTTCCTTGGCTAGCCAGGGAGAGAAGAAGGACGAA

CTCTTCCCCAGCTTCCAAATGAAGAAAAGTCTCTTGAGAGCCACAGAGCAAAAGGTTGTAACA AGGTATACCAGAAAGATAAACAAGATGCTGACAGACCCTTGAGTAAAATGAACAGGGCAGTA AATGGAGAGACTCTCAAAACTGGTGGAGATAATAAAACCCTACTTCACTTAGGCAGCTCTGC TCCTGGAAAAGAGAAAAGTGAAACTGATAAGGAAACTTCTTTGGTAAAGCAAACATTAGCAAA ACTTCAACAACAAGAACAAAGGGAGGAGGCTCAGTGGACACCTACTAAATTGTCTTCCAAAA ATGTTTCAGGTCAGACAGATAAATGTAGGGAGGAAACTTTTAAACAAGAATCACAACCTCCA GAAAAAATTCAGGACATTCTACAAGCAAAGGAGACAGAGTGGCACAAAGTGAGAGCAAGA GAAGAAAAGCTGAGGAAATTCTGAAAAGTCAGACTCCAAAGGGAGGAGACAAGAAGGAATC CTCCAAGTCATTAGTGCGACAAGGGAGCTTCACTATAGAAAAACCCAGCCCAAACATACCCA TAGAACTTATTCCCCATATAAATAAACAGACTTCCTCTACTCCTTCTTCTTTAGCATTAACATC TGCAAGTAGAATACGAGAAAGAAGTGAGTCTTTGGATCCTGATTCTAGTATGGACACAACCC TTATTCTAAAAGACACAGAAGCAGTAATGGCTTTTCTAGAAGCTAAACTACGTGAAGATAATA AAACTGATGAAGGACCAGATACTCCCAGTTATAATAGAGACAATTCTATTTCACCAGAATCTG AAGCGAAAGAGTTTCACTAGCCTCTATAAAGATAGGTGTTCCACAGGTTCTCCTTCCAAAGAT GTTACAAAATCATCATCTTCAGGTGCTAGGGAAAAAATGGAAAAGAAAACAAAAAGTCGTTCC ACAGATGTGGGTTCAAGAGCAGATGGTCGTAAATTTGTTCAGTCCAGTGGGAGAATAAGACA GCCCTCAGTAGACTTAACAGATGATGACCAAACCTCTAGTGTACCTCATTCTGCCATCTCTG CAGCTGATGAGCATGTACATTCCAAACTGGAAGGAAGTAAAGTAACGAAATCTAAGACTTCT CCGGTGGTATCTGGTTCATCTAGTAAATCAACCACCCTTCCAAGGCCACGACCTACCAGGAC TTCCCTCTTGCGCAGAGCACGACTTGGTGAAGCTTCAGACAGTGAACTTGCTGATGCTGACA AAGCATCTGTTGCTTCTGAAGTATCCACAACAAGTTCTACATCAAAACCTCCCACAGGAAGG CGTAACATCTCTCGGATTGATTTATTGGCTCAGCCTCGTAGAACACGACTTGGCTCACTGTC AGCTCGTAGTGACTCTGAAGCAACAATTTCTAGAAGTAGTGCCTCTTCGAGGACCGCAGAAG CCATCATTAGAAGTGGAGCCAGACTAGTACCATCAGATAAATTTTCTCCTAGAATTAGAGCTA ACAGTATCTCTCGACTCTCAGACTCCAAGGTCAAAAGTATGACCTCAGCTCATGGCTCTGCT TCAGTAAATTCAAGATGGAGGCGCTTTCCTACTGATTATGCTTCCACCTCAGAAGATGAATTT GGATCAAACCGTAATTCCCCTAAACATACCCGTCTACGTACTTCTCCAGCCCTGAAAACCAC AGCAGGAAGACTACATCCGAGATTGGACTGCTCATCGAGAAGAGATAGCCAGGATCAGCCA CATCAGGCACTGCCCCTAGTACCACAGTAAGCACTGCTGCCACCACCCCTGGCTCTGCCAT AGACACTAGAGAAGAGTTGGTTGATCGTGTTTTTGATGAAAGCCTCAACTTCCGAAAGATTC CTCCATTAGTTCATTCCAAAACACCAGAAGGAAACAACGGTCGATCTGGTGATCCAAGACCT CAAGCAGCAGAGCCTCCCGATCACTTAACAATTACAAGGCGGAGAACCTGGAGCAGGGATG **AAGTCATGGGAGATAATCTGCTGCTGTCATCCGTCTTTCAGTTCTCTAAGAAGATAAGACAAT** CTATAGATAAGACAGCTGGAAAGATCAGAATATTATTTAAAGACAAAGATCGGAATTGGGATG ACATAGAAAGCAAATTAAGAGCCGAAAGTGAAGTCCCTATTGTGAAAACCTCAAGCATGGAG ATTGATCCTGATGGAACTTTGGAGGCTCTGAACAACATGGGATTTCCCAGTGCTATGTTGCC ATCTCCACCGAAACAGAAGTCCAGCCCTGTGAATAACCACCACAGCCCGGGTCAGACACCA ACACTTGGCCAACCAGAAGCTAGGGCTCTTCATCCTGCTGCTGTTTCAGCCGCAGCTGAATT TGAGAATGCTGAATCTGAGGCTGATTTCAGTATACATTTCAATAGATTCAACCCCGATGGGG AAGAGGAAGATGTTACAGTACAAGAATGACTTTCTCTTGATTGTTGAAAAAATCATTACCTGTG GAATGGCTAGGAATATTGGAAGCAGCATAGTGTTGATGTACGCAAAACAAGACAGCTTGGTC TATCAATCCTTTCAAACTATTTAGATAACCACTTGATGCACAAATAGGAAAAAGCAGATTGTG GCAGTGTCGCCTTTTGTGGTTTTATGATTTTCAAATTGAATTTAATGATTACACCCTTTCCCTT CATAGATCTTTTTCTTTTTTAAGCCATGCTGTGACCTACAAGCAAACTAAATAGCCAACAT TTCTGAACCCCTAAGTCTCCTGTGCCAAGCTGCTCCCTGAAATGGACTTCTTCATCTGTACA GATTTGTTAAACCATTCTATTTGCTTCTTAATAATAGGATTTATATTAGTACTCATTACCATTGG ACACAATGACATAAGTACTCTCCACAGTAAAGCAGACCTTTCACAACAGTCACTCTGTGTCCT AAAATTTTCCAACATAGATGTGATTTATATAACTTTGTTGATACGTAAATTGTCTTGGGGTTTA CGGAAATTAACTATTATGTTTGCACTAAGATTTGCTGGGAGTGGTAGGTGGACATATCTATAT

### Table 4

ATCAATAAGGACTAACCGTCTTTTTTGTACATAGGAGATTGATAATACTGTATTTGTTTTAAGC CCACAGTGTTTTACTCCACTTTCAAAAAGATCAATTTGGCACTTTTTTTCATTTTTTAATGGA AATAAGATTTGGTCTCATTTTAGGTTAAATGATAACTAGAAAGATTAAACTAGACAGATAGT TTAGGTGGAGTATATTTTTAAAACTCAGAACATGTATATTGGTCCTGTGTTACCAAGTTTATAT GTGACAGTTGAAAAAGAAATTCCCTTGAAATGATCATGAGGTTAAAATTTTCTTCATTAGGGG ACTTGGAGAACCAGTAGTCGTAAGATTAGTTGATAGTTTCACTCCCAAGCAATGAATTGCTTC GCAAGACGACGACAAAGGCCTTTGGCCTGTGCTACTAAACAAGAAGCCTATGAAAAATTTCT TCTTTAAACTTGTTTTTCTCTTTCCAGTAAGTTCACATTTGGATAATTTTAAAAAGAAAAGTAA TTACCTTTGTGTTTCCAGAACACTATAATTGGGGTGTATCTTAATTCAGTTAAATATTATTAGT AGACCTGGATTTTCCCCCTTGACCCCATCAGTCTATAAAGGTTAAACTGCAACTTTTATGAAA TGGTCTTTAATATTTCCACAATAATCCTGTGCTATATTTGTTTTAAGAAACAAAGTAACTCTAT ACACTTCAAGACTTTACAGGATTTTTTAAATCCTGTATTGTTGGATCAATTAATAAAGATGCAA AAAAACTTTATAGAGATGTAAAAACAAAACTATAATGGATCTCCTATTTTTCTTTAAATACAAAA AAAAAAGGTAAATGAACTATTCTCCTTGTAAAGCTAAATTCCCCATTCTGTCTAATAAAGGAA GACTGAAAAAAGGTTTTAAAGAACATAAATGGAAAGATACAAATGCTTTGAAGGAATAAACGA AATGTTAAAACAGGGTCAATCCATTTGAAGAAAAAGTTGGACAAAATAATCAGCATTGCTCCC TCTTTATTTAATATTTGGGTACTGATTATATCCACATGGAAGTAGAAGGTAAGGAGTTTAGG AAAATACTAGAATCTACTCTGCTTACATTCTTGTTTAAGTGTTTACACAGTTTGGTTCAATTAT CTGGAACTTTAAAAAAAAAAAAAAACGGCACGAGGGGGGGCCCGGTACCCAATTCCCCCTA TAGTGAGTCGTATTACGCGCGCTCACTGGCCGCCGTTTTACACACGTCGTGACTGGGAAAA **CCCTGGCGTTCCCAACTTAATCGCCTTGCANNN** 

>228 >229

NNNNNNNNNNNNNNNNNNNNNNNNNNNNNTAGTAGAGACGAGGTTTCTCCATGTT TGGGATGACAGGTGTGAGCCACCACCCCCAGCCTGTTGTAAAAACTTCTTAAACTTTAAAAA AAAATAACCCATGAAAATGGCTTAATAAAATAACATTCCAATAAAACTCTTCTATAATACTTTTT AAAAAAAAAAAAAAAAAAAAAAAAAAAAAGTACCTGCCCGGGCGGCCGCTCGACCGCCCGGGC AGGTACGGCCTGTCCGAATGATGCGTTGCAGTTGATTTGTCTTCACCCAAATAATTTCATCTA CAGAGGAAGAAAGCCATCATCCTGTAGTACCTCGGCCTTGAGCCTGCGCATCTCATCAT CTGTCAGGGTCCCATAGGGCAGTTCCATGTGAATATCNCAGGGTGGGTCAGCCATCACAAC TGCAAACTTGCCCAAGATACTGACGTCCAGGTAGCGGATATCACAACAGATCCACTGCATAA **AGTGGTATTTGGTCATCTTCCCTACTTTAACTCTGAGATTCATGGCCCGAGTCCCTCTTTTCC** ATTTGATTTTTCCTATTCCCTTAAAAGCTTATCTATCCCCCTCCATTCCCAATAAGCAAGACAA GATTGCTGAATTATGCTCTGCTTTCTTAACGTGTATGGCTGCCCTATCAAACATAAGTCCGTA AGTTGAGACGAGTTTTCTGAGCAGACAGGTACCTGAGGTGGGAAGAGTCGGTCTGCACTGG AATCACCTCCGACACTCTGTGTAAGAGCAAGCTCCTGGCTTGGCGTGTGGTCTTTGCTGCCA **GGGGCCTCAGAATCCATGCAAGCATCAATTTCATAGTGAACATACTCGGACGC** >230

TTTTGCTAAGAACCAAGAATTCAACTATCGAGTATGATGGTATTATGCAGAAATCTCAAGATA ATGTCACAGAACTGTACGACGTTTCCATCAGCTTGTCTGTTTCATTCCCTGATGTTACGAGCA ATATGACCATCTTCTGTATTCTGGAAACTGACAAGACGCGGCTTTTATCTTCACCTTTCTCTA TAGAGCTTGAGGACCCTCAGCCTCCCCAGACCACATTCCTTGGATTACAGCTGTACTTCCA ACAGTTATTATATGTGTGATGGTTTTCTGTCTAATTCTATGGAAATGGAAGAAGAAGAAGCGG CCTCGCAACTCTTATAAATGTGGAACCAACACACTGGAGAGGGGAAGAGAGTGAACAGACCA AGAAAAGAGAAAAAATCCATATACCTGAAAGATCTGATGAAGCCCAGCGTGTTTTTAAAAGTT GTATTCATTTTTCTACCCTTTCCTTTGTAAGTTCCTGGGCAACCTTTTTGATTTCTTCCAGAA GGCAAAAAGACATTACCATGAGTAATAAGGGGGCTCCAGGACTCCCTCTAAGTGGAATAGC CTCCCTGTAACTCCAGCTCTGCTCCGTATGCCAAGAGGAGACTTTAATTCTCTTACTGCTTCT TTTCACTTCAGAGCACACTTATGGGCCAAGCCCAGCTTAATGGCTCATGACCTGGAAATAAA AAATAGACCTCTCAATTTCTGGAAAACTGCCTTTTATCTGCCCAGAATTCTAAGCTGGTGCCC TTATGACCTTATAGTGTTAATATCTTGAAACATAGAGATCTATGTACTGTAATAGTGTGATTAC TATGCTCTAGAGAAAAGTCTACCCCTGCTAAGGAGTTCTCATCCCTCTGTCAGGGTCAGTAA GGAAAACGGTGGCCTAGGGTACAGGCAACAATGAGCAGACCAACCTAAATTTGGGGAAATT AGGAGAGGCAGAGATAGAACCTGGAGCCACTTCTATCTGGGCTGTTGCTAATATTGAGGAG GCTTGCCCCACCAACACGCCATAGTGGAGAGAACTGAATAAACAGGAAAATGCCAGAGCT TGTGAACCCTGCTTGTCTTGAAGAACTGACTAGTGAGATGGCCTGGGGAAGCTGTGAAAGA AGAAATACATGAAATGTCTGGTCTGTTCACCCCATCAACAAGTCTTGAAACAAGCAACAGAT TTTGCGAGATACCCAAGCTATTGGGAN >232

GAACCATCTCTACATTTTTTTTACTCAATCGACCCTGAATGCTACAGCATTATCCAGGGCCGC AGAAAACACACATAATACTTTATTCCTGATAAACCATTCGATGTCCTTAAGTCCGCCCATATC ACCGTACATTCTGTGCCATCAAGAAATTTACTCAGCTGGGCACAGTGGCGCGATCTCAGCTC **ACTGCAACCTCCGCCTCAGAGGTTCAAGTGATTCTCCTGCCTCAGCCTCTGGAATAGCTGG** GACTACAGGCACCTGCCACCACACCCAGCTAACTTTTTGTATTTTTAGAGAAGATGGGGTTT CATCATGTTGGCCCAGCTGGTCTCAAACTCCTGATCTCAGTGATCCATCTGCCTCAGCCTCC AGAATGATTTGCAAATTTGAAAATAGGAACTCCACTAGGAATGCCGGATAGAAGAGTGCTTC ACATTTGTAGAGGGAGACAAGAACTAAATATCACGACGTCTTTCTGAGCCTTTTGGTTTGCTA ACGTGCCCAAATTCTTATTCCAAACGGTATAAGATAATTATGTGTAAATGAATACCAGCTCT GAGTCTTGCTCTGTTGTCCAGCCTGGAGTGCAGTGGCATGATCTCGGCTCACTGCAACCTC TGCCTCCAGGTTCAAGCGATTCTCCTGCCTCAGCCTCCTAAGTAGCTGGTATTACAGGAGT GTGCCATTAGCCTGGCT >233

# Table 4

CGGTCACTTCACACTCTTTGCTCCCACCAATGAGGCTTTTGAGAAACTTCCACGAGGTGTCC TAGAAAGGATCATGGGAGACAAAGTGGCTTCCGAAGCTCTTATGAAGTACCACATCTTAAAT AATTGAGATAGGATGTGACGGTGACAGTATAACAGTAAATGGAATCAAAATGGTGAACAAAA CCAAACAAGTTATTGAGCTGGCTGGAAAACAGCAAACCACCTTCACGGATCTTGTGGCCCAA TTAGGCTTGGCATCTGAGGCCAGATGGAGAATACACTTTGCTGGCACCTGTGAATAA CATATTGAAAGTAAAAGTTGGCCTTAATGAGCTTTACAACGGGCAAATACTGGAAACCATCG GAGAAAGGGAGTAAGCAAGGGAGAAACGGTGCGATTCACATATTCCGCGAGATCATCAAGC CAGCAGAGAAATCCCTCCATGAAAAGTTAAAACAAGATAAGCGCTTTAGCACCTTCCTCAGC CTACTTGAAGCTGCAGACTTGAAAGAGCTCCTGACACCACGCTGGAGACTGGACATTATTTGT GCCAACCAATGATGCTTTTAAGGGAATGACTAGTGAAGAAAAAGAAATTCTGATACGGGACA AAAATGCTCTTCAAAACATCATTCTTTATCACCTGACACCGGGGGTTTTCATTGGAAAAGGAT TTGAACCTGGTGTTACTAACATTTTAAAGACCACACAGGAAGCAAAATCTTTCTGAAAGAAG TAAATGATACACTTCTGGTGAATGAATTGAAATCAAAAGAATCTGACATCATGACAACAAATG GTGTAATTCATGTTGTAGATAAACTCCTCTATCCAGCAGACACCCTGTTGGAAATGATCAAC TGCTGGAAATACTTAATAAATTAATCAAATACATCCAAATTAAGTTTGTTCGTGGTAGCACCTT CAAAGAAATCCCCGTGACTGTCTATACAACTAAAATTATAACCAAAGTTGTGGAACCAAAAAT TAAAGTGATTGAAGGCAGTCTTCAGCCTATTATCAAAACTGAAGGACCCACACTAACAAAAGT CAAAATTGAAGGTGAACCTGAATTCAGACTGATTAAAGAAGGTGAAACAATAACTGAAGTGAT CCATGGAGAGCCAATTATTAAAAAATACACCAAAATCATTGATGGAGTGCCTGTGGAAATAAC TGAAAAAGAGACACGAGAAGAACGAATCATTACAGGTCCTGAAATAAAATACACTAGGATTT CTACTGGAGGTGGAGAAACAGAAGAAACTCTGAAGAAATTGTTACAAGAAGAGGTCACCAAG GTCACCAAATTCATTGAAGGTGGTGATGGTCATTTATTTGAAGATGAAGAAATTAAAAGACTG CTTCAGGGAGACACCCCGTGAGGAAGTTGCAAGCCAACAAAAAGTTCAAGGATCTAGAA GACGATTAAGGGAAGGTCGTTCTCAGTGAAAAATCCAAAAACCAGAAAAAAATGTTTATACAAC CCTAAGTCAATAACCTGACCTTAGAAAATTGTGAGAGCCAAGTTGACTTCAGGAACTGAAAC GAGAAACATGAGGGAAATTGTGGAGTTAGCCTCCTGTGGTAAAGGAATTGAAGAAAATATAA CACCTTACACCCTTTTTCATCTTGACATTAAAAGTTCTGGCTAACTTTGGAATCCATTAGAGAA AAATCCTTGTCACCAGATTCATTACAATTCAAATCGAAGAGTTGTGAACTGTTATCCCATTGA AAAGACCGAGCCTTGTATGTATGTTATGGATACATAAAATGCACGCAAGCCATTATCTCTCCA TGGGAAGCTAAGTTATAAAAATAGGTGCTTGGTGTACAAAACTTTTTATATCAAAAGGCTTTG CACATTTCTATATGAGTGGGTTTACTGGTAAATTATGTTATTTTTACAACTAATTTTGTACTCT CAGAATGTTTGTCATATGCTTCTTGCAATGCATATTTTTTAATCTCAAACGTTTCAATAAAACC **ATTTTTCAGATATAAAGAGAATTACTTCAAATTGAGTAATTCAGAAAAACTCAAGATTTAAGTT** AAAAAGTGGTTTGGACTTGGGAACAGGACTTTATACCTCTTTTACTGTAACAAGTACAAATTA CATCATATATCTGTCCTGTTTCTTCATTTTTCTCAATTTCCACACGCTATAAATTTAGATCGGC CAATAAAGT

>235

>236

TATAGGGAGTCGACCCACGCGTCCGCTTAAAGAGGAAAAGAGGGAAGAAGATGAG GAGAATGACAATGATAATGAAAGTGACCATGATGAAGCTGACTCCTAAACCAAAAGTGCTTT AAAAACCAGCCTGGCGAGGACAGCCCTGGACCCACTCCACTGTCTCTAAGTAAACACAGCA CTGCCCGCTTTTAGCGTCTTCACTTCTTCACAGAGTTCCAGTGCGTGGTATTCTTTCGAGGT

ACGCGGGGGGACGTAAGGTGGGGCGGTGAAAGAAGTTTGCTGACGAAGATGGC CTGCAGTTTTGTGATCTGCAATGATTCTTCCCTTCGAGGTCAGCCCATTATCTTTAATCCTGA CTTTTTTGTGGAGAAACTCCGACATGAGAAACCTGAGATTTTCACTGAGTTGGTGGTCAGCA ATATCACAAGGCTCATCGATTTACCTGGAACTGAGTTGGCTCAGCTGATGGGGGAAGTGGA CCTTAAGTTGCCTGGCGGGGCTGGCCCAGCATCAGGATTCTTCCGGTCTCTCATGTCTCTC AAGCGAAAGGAAAAAGGAGTGATATTTGGGTCCCACTGACGGAGGAAGGCATTGCCCAGA GGTAATAGTGTCCGACAGCAGATTTTAAGGGATGCTCTCAATAATGGAACTGACATTGACTT GGAATCAGGGGAATTTCACTCAAATGATGTTGCCACTTTGCTGAAGATGTTTCTAGGAGAGT TGCCGGAGCCTCTGCTGACACATAAACACTTCAATGCACACCTCAAAATCGCTGATTTGATG CAGTTTGATGATAAAGGAAACAAGACCAATATACCAGACAAGGACCGGCAAATTGAGGCTCT CCAGTTGCTCTCCTCCTCCTCCTCATTTGCTGAAGTTATTGCTTGATCT CCTATACCAGACAGCAAAGAACAAGACAAGAACAAGATGTCAGCCTATAACCTTGCCCTTA TGTTTGCACCCCACGTCCTGTGGCCAAAAAATGTCACTGCAAATGACCTTCAGGAGAATATC ACAAAGTTAAACAGTGGGATGGCTTTTATGATTAAACACTCCCAGAAACTTTTTAAGGCTCCT GCTTATATTCGGGAGTGTGCGAGATTGCACTATTTGGGATCCAGAACTCAGGCATCAAAGGA TGACCTTGACCTCATAGCTTCATGTCATACTAAGTCCTTTCAGCTGGCAAAGTCTCAGAAACG GAACCGGGTAGATTCCTGCCCTCACCAGGAGGAGACCCAGCACCATACGGAAGAGGCACT GAGAGAGCTGTTTCAACACGTTCATGATATGCCAGAGTCAGCAAAGAAGAACAACTTATTA GACAGTTTAATAAGCAATCATTGACCCAGACACCAGGGCGAGAACCTTCTACTTCCCAGGTA CAAAAGAGGGCTCGTTCGCGCTCCTTCAGTGGGCTTATTAAGCGGAAGGTCCTGGGAAATC AGATGATGTCAGAAAAGAAAAAGAAGAACCCTACTCCAGAATCTGTGGCCATTGGTGAATTG AAGGGAACCAGCAAAGAAAATAGGAACTTATTATTTTCTGGCTCTCCAGCTGTCACGATGAC ACCAACAAGATTGAAGTGGTCTGAAGGGAAGAAGAGGGGGAAAAAAAGGATTTCTCTGAAGG ATCCAGAGTTGTCTCCTATGGTCCATGCAGAATTTTCTGTTTAGTGGGCAGGTGTTATTCCTG CCCACAGCAAAGCTTGGACTTGCAGCTTGCTTGCTGCATTTTGAATTGTCAAAGCCAACTAA TACCGTGACCGACTGATACCTCTAACCCCACTCACTGGATGATGTTTGCAAGCTGTGCCTT CACTTTTGAAAAAAATATGAAATGTGTGCTCAACTGCCAGTAATTTTTTAAAAAGCACTGTCC CAGTGGATTGATGTTTTTAATGGATATTTTGGGTTTTTCTCTGTTTTGATAGTATTGGGTA AGATATCTTTCCCTCTTTTTCACTTTGAGCTTTGGGAAAACTCTTTATCTTATGAGGCTGTATT CCTCAATACCTAATTTGTGTCCAAAGAATTTATAGCTCTTCTGGACATTTTTTATTATTTCTTG **GGTGTGACATCAGAGTATTTGACCTGCAGTATTGAAAAAGGAGAATTCAGAATGATACAGTA** TCTCTCTCTTTCCCTTTCCTCAGTGATGTGAAAATAATTGTGTTTTGCTGAACTTGTTATCTTC ATTCAATTTCCTCTTGACTAAAACATCTCTGGTGCCAACGTAATACTTCTGAACCACATCACT GTGACTCAAGGAAAGTCACTGACAGCATAAGAGAAGTTTGCTAAAATATTTGTATGTGGGGG AAGCTCTGGAGTGTGCCTAGGAGGGGGGCTGGCTTTATGTCCCAGGATGACTCTTTAT GGGTGGGATTACATTGCACCCTCTGAGGGTGCAGGCTAGACCGTCTCCTGAGAGGAAGTTA

#### Table 4

NNCTCAGAGGATTACCGACCCACGCGTCCGCAACATCCTGGCTTAGTATTGTGTGC AAAATCAGAGAGGGGTGCAAGATCCTGATTTTTCAGGAGTTCAAGCGACAATGGCAGCCCA ATACGGCAGTATGAGCTTCAACCCCAGCACACCAGGGGCCAGTTATGGGCCTGGAAGGCAA GAGCCCAGAAATTCCCAATTGAGAATTGTTTAGTGGGTAAAACCGGAGCAGGAAAAAGTG CAACAGGAAACAGCATCCTTGGCCGGAAAGTGTTTCATTCTGGCACTGCAGCAAAATCCATT ACCAAGAAGTGTGAGAAACGCAGCAGCTCATGGAAGGAAACAGAACTTGTCGTAGTTGACA CACCAGGCATTTTCGACACAGAGGTGCCCAATGCTGAAACGTCCAAGGAGATTATTCGCTG CATTCTTCTGACCTCCCCAGGGCCTCATGCTCTGCTTCTGGTGGTTCCACTGGGCCGTTACA CTGAGGAAGAGCACAAAGCCACAGAGAAGATCCTGAAAATGTTTGGAGAGAGGGCTAGAAG TTTCATGATTCTCATATTCACCCGGAAAGATGACTTAGGTGACACCAATTTGCATGACTACTT AAGGGAAGCTCCAGAAGACATTCAAGACTTGATGGACATTTTCGGTGACCGCTACTGTGCGT TAAACAACAAGGCAACAGGCGCTGAGCAGGAGGCCCAGAGGGCACAGTTGCTGGGCCTGA TCCAGCGCGTGGTGAGGAGAACAAGGAAGGCTGCTACACTAATAGGATGTACCAAAGGGC GGAGGAGGAGATCCAGAAGCAAACACAGAGCAATGCAAGAACTCCACAGAGTGGAGCTGGA GAGAGAGAAAGCGCGGATAAGAGAGGAGTATGAAGAGAAAATCAGAAAGCTGGAAGATAAA GTGGAGCAGGAAAAGAAGAAGCAAATGGAGAAGAAACTAGCAGAACAGGAGGCTCACT **ATGCTGTAAGGCAGCAAAGGGCAAGAACGGAAGTGGAGAGTAAGGATGGGATACTTGAATT AATCATGACAGCGTTACAGATTGCTTCCTTTATTTTGTTACGTCTGTTCGCGGAAGATTAAAC** TAGCATAGTCGAGTGCTCTAGTTTCTGTCTCTCAGGCACTCGTAACTAAGGACCACCATTGG CCATTGGTAGATGTTTGATTGACTTAACAAGAGGGGACAAATTTTCAATTTGTGAAACTCCA AAGCAGAAAGTATTGGTGCTTGCTACCTTGTGAATTCTTCCTTAGACATGCAGAGAAAATGTA TGCAAGAGACCAAAAAGATGGCTCCAAGCTATGTCATGTTACCTGTAATAAAATCTTTTCTTC AATTCCATTGTCATATAAGGAGTCAAATTGTTTCTTATCATTTGTTCATTGAAGAACAGAGACC TGTCTGGAAAATCGATCTCTACAAATTCAATTAAATAATGATCCCCAAATGCTGAAAAAGTGA **AATACAGCAATTCAACAGATAATAGAGCAATGTTTAGTATATTCAGCTGTATCTGTAGAAACT** CTTTGACGAACCTCAATTTAACCAATTTGATGAATACCCAGTTCTCTTCTTTTCTAGAGAAAGA TAGTTGCAACCTCACCTCACTCAACACTTTGAATACTTATTGTTTGGCAGGTCATCCAC ACACTTCTGCCCCCACTGCATTGAATTTTTTTGCTTATGTTTATAATAAAACTTTTCAATTAT >239

GTTACTGTTCTGTTCCAACTATAAATCCAGGATGACTGTTACTCAGATTCAGTGCTATGTAGA AAATAGAATGCACAGCCAAAAACATAATTTGGGGATGACTGGCAGCACCTTTTTTTCCCTTTC TTAAGAGGCTAACTGAAAGTTGATTAGGATTCTTGAGAAGGTAACTAAAAGTTGAATCAAA TCTATATTCACTGCTATAGATTTAATAAAAGGAAAGACCACTGTAAAGATGCAACTACAACCT GATGCGTCTGCTGAGGAGAGGACTGGGCAGCTTGTTGAAGGCTCGTCAAAAGTAGCGCTTA GTTATCACAAGGCCTGCACTCAACCTCAAAAGCGTAAGGTTTAGGCCAGGCACGGTAGCTC ATGCCTGTAATCCCAGCACTTTGTGAGGCAGAGGCGGGTGGATCACCTGAGGTCAGGAGTT CCGAGACCAGCCTGACCAACATGGCAAAACCCTGTCTCTACTAAAAAATACAAAAATTAGCTG GGAGTGGTGGCGCACCCTGTAGTCCCAGCTATTGGGGAAGCTGAGGCAGGAGAATCACTT GAACCTGGGAGGCAGAGGTTGCAGTGAGCCGAGATCACATCACTGCACTCCAGCCTGGGC AACAGAGCAAGACTCCGTCTCAAAAAAAAAAGCATAAGGTCTGCCTACCTCATGGGCACCC GAGTATATTTCAAAAATATCTTTATTAACCAAGGAAGCAATTACTGCAAACATCAGGACAAAG GACATTCTAATCTAGGACTTGAGTTAAATAGAGGTTTACACCTAATCACAAGAAGAGAGGGGA AAGCAATTACGTGTGCTGAAACCAAGTTTCATCAATGACAAATATTTTAAAATGACTTTTAAAA TACTTAACATTGGCCAGGCACGGTGGCTCCCGCCTGTAATCCCAGCACTTTGGGAGGCCCA GGCGGCAGATCACTTGAGGTCAGGAGTTCAAGACCAGCCTGGCCAACATGGTGAAATCCT GTCTCTACTAAAAGTACAAAAATCGGTGGGGCGTGGTGGCACACCCTGTAATCCCAGCTAC TTGGGAGGCTGAGGCAGGAGATCGCTTGAACCTGGGAGGTGGAGGTTGCAGTGAGGCAA GATTGCGCCATTGCACTCCAGCCTGAGGGACAGTGAGACCCGGACGCGTGGGTGACNNN >240

NNATGTGGTTACGACCCACTGTATTGAGGTGACGCGATCCATAGGCTGTGGTGTTT GTTTTCGCTGATCCACACAACGTTGGGGCACTGTCTATTCATGTGTTCAAGCTGAAGGCTC GTTCTCGGTTGTCATTTTACAGTGTTTTTCTACGGGGTTACATTACAGGAATGTTGTAGCGAC GTTTAGCCCGTGGAGTATCAACGTCTTGAGACTCCGTGTGAGACTCCCTGGTTTGTTCCACA ACAGTGTGTTTTTAGATTCCGTACCTTTGATTAAGGAACACATCATGCCGTGAAGCCAATTTA TATTCTGCAATTCCGTAGTGCATGTAATGTATTCTGCCGTCTCGTAGTGTGAAGCCATGCTTG GCACATCCAGTTCTTTGATGTCTGGCTGCCTTCTGCGGGCCAACTGTCTTGTGGAATTCGTT GCTCCCAGAGATAGCTTGAACTGCAGATCCCGCACAGCATTGCACTGAGCTGTCGTTGTATC TGAGCCTGGACATGGCGGCCGAGGTACTCACAGTCACGCAAATTCACAGTCTGCGTGCACG GCTCTCCATTCTTCTTGGCTTTACAGGTTCCCAGGTCAAGAGCTTCACCCATAATTAAGA CCTTCTGAGGATGATCGATAGATAAACACACCTCCTCTGAACCATCCTTGGGCTTCATGGGG TTGGCATTGAGGATCCCTACGACAGTCCCCTGCTCCGTCTTCCAGAGCGCTTTGTGAACTTC TCCAAATAAGAACAAGGACACACATTGTGTCAGGTCACGAAGATCATTCAGTTTCCATATGCT GAAGGTTTTTCCACTATTCACACTCTGTGGCGTAACCTTCTTCAATATAACCCCAAATGTCAC CCAATCTATTTCTTCCAGCTTCTCTCTGGCCATCTTTTCCTTGATCTGAGCAGTCTGATCAG TTTTCGGCCGGTCATGTGTCTTCGTTCATATTCTCTGGAGGATACTCGAGCCCGCCTCGAGC CGCAGACCAGGAGAAGGCTTCCACACAGATGGCGATTGAGTCGTTTCCTCACAGAACTTTC ACTCGGGGTCCACCACATATITGACCTCTAGTTATCCCACTAGGTTTGTTCCGAGAAATCGT CTGTAGGGGTTGGGAGGTGCACTTGTCATCCTTGAAGATGAGCTTTTGGGATCTGGAGGT GAAGCCTTTGGTGTTCGAGCCACCCTCTTGGTTCTTGGTAGCGCAGGGACATCAAGCTCCG CAGAAAAGCATGTTGACTCCTGAATTCTCTGAACTCTCCTCTCCTTAAGAGGTGGCCGGGGA

#### Table 4

GACTTCTCAGGGGATTTTTGCAGACGGGCTGGGCTTGCTGTTTAATTGTTGTTACTTTT
AGCTGCTCTTGTAAGGCCTTCATTTGCTCTTTGCAAATTCCTTTAATTCCTCTTGCAACTCTTCAT
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GTCGGCATCAAAGAGCTCATCAAATGCGTCGGGCTCGCCATTTTCCCGCGTCAAGAAGTTAT
TTTCTTCTGAATTACAATCCAAGGCTGACTCATTTTCTTCCAGCAGTGCGGTCAGCAGAGACA
GATTGTCTTCCTCCTCATCCATGCTGTCAAGAGGACAGTTGTGACAGGAAACTTCGAAGGAG
GCTCAGATGCCCAGATGAGCAATGTAGAATCTTGGCCGATGCCGGGACGCCTTCTTCGTTC
ACAGCTGAACCCGCCAAAATCGGACNN

NNCTCCCGCGGTGGCGGCCGAGGTACGCGGGGTGCTGGGATTACAGGCACGAG CCAGTGCGCCCAGCTGCCTCTGTTTCTTTATTAGCTGTTCTGGACTGTGGGGCTCCTTGGG CAGATGCTGTATTATGGGGATAAGCCACACACTTTTTGAACTGGCCCGGTCAGGGGGGACA TAACCATTTCCTGTGCCACCCATCAATCCCCACCTATTCTGAGTGTAGGCTCCTCCCCTGC TTGAGTAATGGCCACAGATCTTGGCTCGGCACTCCTAAGCTGCATGTTGAATTCCTGGGACA ACAAGACTGGCTTGTGGTTCCATTCTCCAGATCCTTGGGTTGGCTTCTGGGTGCACTAGGAG ATCTGAAATGCTCTCAGGCCACCAGGAAAGTACTGGAAGTAAAGTCTGACTCTAAAGAAGAT GAAAATCTAGTAATTAATGAAGTAATAAATTCTCCCAAAGGGAAAAAACGCAAGGTAGAACAT CAGACAGCTTGTGCTTGTAGTTCTCAATGCACGCAAGGATCTGAAAAGTGTCCTCAGAAGAC TACTAGAAGAGACGAAACGAAACCTGTGCCTGTAACTTCTGAGGTGAAAAAGATCAAAAATGG CTACTTCAGTGGTCCCGAAAAAGAATGAGATGAAGAAGTCGGTTCATACACAAGTGAATACT AACACAACACTCCCAAAAAGTCCACAGCCATCAGTGCCTGAACAAAGTGATAATGAGCTGGA GCAAGCAGGAAAGAGCAAACGAGGTAGTATTCTCCAGCTCTGTGAAGAAATTGCTGGTGAA **ATTGAGTCAGATAATGTAGAGGTAAAAAAGGAATCTTCACAAATGGAAAGTGTAAAGGAAGA** AAAGCCCACAGAAATAAAATTGGAAGAGACCAGTGTTGAAAGACAAATACTTCATCAGAAGG AAACAAATCAGGATGTGCAATGTAATCGTTTTTTCCCAAGTAGAAAAACAAAGCCTGTGAAAT GTATACTAAATGGAATAAACAGCTCAGCCAAGAAGAACTCCAACTGGACTAAAATTAAACTCT CAAAATTTAACTCTGTGCAGCACAATAAGTTGGACTCTCAAGTTTCCCCTAAATTAGGCTTAT TACGAACCAGTTTTTCACCACCAGCTTTAGAAATGCATCATCCAGTGACTCAAAGTACATTTT CTGAAGAAGTGAAAATTAATGATATTACAGTAGAAATTAATAAAACCACAGAAAGGGCTCCTG **AAAATTGTCATTTGGCCAATGAGATAAAACCTTCTGACCCACCATTGGATAATCAGATGAAAC** ATTCTTTTGATTCAGCATCAAATAAGAATTTCAGCCAATGTTTGGAATCCAAGCTAGAAAACA **GTCCAGTGGAAAATGTTACTGCTGCTTCGACTCTGCTCAGTCAAGCAAAAATTGATACAGGA** GAGAATAAATTTCCAGGTTCAGCTCCCCAACAGCATAGTATTCTCAGTAACCAGACATCTAAA AGCAGTGATAACAGGGAGACACCACGAAATCATTCTTTGCCTAAGTGTAATTCCCATTTGGA GATAACAATTCCAAAGGACTTGAAACTAAAAGAAGCAGAGAAAACTGATGAAAAAACAGTTGAT TATAGATGCAGGACAAAAAAGATTTGGAGCAGTTTCTTGTAATGTTTGTGGAATGCTGTATAC AGCTTCAAATCCAGAAGATGAAACACAGCATCTGCTTTTCCACAACCAGTTTATAAGTGCTGT TAAATATGTGGGCTGGAAGAAAGAAAGAATTCTGGCTGAATACCCTGATGGCAGGATAATAA TGGTTCTTCCTGAAGACCCAAAGTATGCCCTGAAAAAGGTTGACGAGATTAGAGAGATGGTT GACAATGATTTAGGTTTTCAACAGGCTCCACTAATGTGCTATTCCAGAACTAAAACACTTCTC TTCATTTCCAATGACAAAAAAGTAGTTGGCTGCCTAATTGCGGAACATATCCAATGGGGCTA CAGAGTTATAGAAGAGAAACTTCCAGTTATCAGGTCAGAAGAAGAAAAAGTCAGATTTGAAA GGCAAAAAGCCTGGTGCTCCAACATTACCAGAGCCTGCAATCTGCGGGATCAGTCGAAT ATGGGTATTCAGCATGATGCGTCGGAAGAAAATTGCTTCTCGCATGATTGAATGCCTAAGGA GTAACTITATATATGGCTCATATTTGAGCAAAGAAGAAATTGCTTTCTCAGATCCCACTCCTG **ATGGAAAGCTGTTTGCAACACAGTACTGTGGCACTGGTCAATTTCTGGTATATAATTTTATTA** ATGGACAGAATAGCACGTAAAACAAATTCTTGCCTACACCACTAGAAGACATCTATTGAAGA GAATGGATTGGTTGCTGACTTTAACCAGGAACTAGGGCCATTTTTATTACAATGAACTCAGGA CTGGCAACAACCATATGGTTGTTCCATTTTCATAAAATTGGAAACAATGCAGTAATAGCTTAT TATAGTTATTTAGACATGTTTACATGCAGCAGATAATTGTTCATAGTGGACTGAAAACTAATG CAAGGACTATGGTCTCAGTGATAAGTATATTTTGAAGTTCTTAATATGGAAATATACCAGTGT AGCTTGGTACTGTATTTTTTATATTGATCTGCTGATACCAGTGATAGGCTTAAAGATTGTATT

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GGGGCATTCTTTTTCTCTTTTCAGCACGCATCTTTCTTTTCCACTTACTCCGTAAGCTTTTAG
CCATGTTTTACCTTGAGGGCCGAAGTTAACTTCAGCGGGAGTGAACGACAGGGGTGGGCTC
CACTTTATCCAGTGCACTCGGAAGCCGGAGGGCCCCCACCAAAAAGAGCAAGGGGAACCCT
CGCCCTCAACAAGGCCTGCATCTCCGGACTGGAGCTCAAGTATAG
>245

NNATGGGGCAACGTGGAAGAAATGGCCAGAATTTNAACTGGTCATCAATGCGANCA CTTTTTACAAAAGNCCAGAGCCAGAATAACCCTTTCATTAAATCTTCCCACCAACATCCTGAT TTCATGGTCCGTAGGAGGATGACCACTAGCCCACCACCTTCCACTGTTTCTACAGTCCTGGC GGATCTTGTGGGTCTCGTTGTAGTAGCAGTAGCGAATGTTTGTGGCTGCTATGAAGAGTTCA AAGGGGTCGTCCTGCTTTATGTTCAGTGTTCCATTCTTTATTTTCTTCTGCAGCTGTCGCATT CTTTTCTTCCGGTGACTGCTAAACCCCAGCTCTTTCTTATAACACCACAGCACTGAAGGCCG AGCCTTCACAGTTGCTTTGGATAACATGTGATGAAGTATTACCACCTGATCTTTTCCTCGATC CCCAACTACAACAAGAGAGATCTTTGCCGCTCAGCTACTCCATTCTCAATGAGAATCCGGA TTCGGTTATCCACCTTTTTCCGATGCATGGTGAAAAATTATTACTGCGCCCCGAGCCCGGGG GATCCCAGCCAGTGGAGAAGGGGAAGCACGTGGGAGCACCGGAAAGAGAGAAG GCACAGCTGACTGCCCTAGCGTATGCCTGGTGTCCGGGTCACGTAGTAAGCCTGGCTCCG CGGCACGCGTCCCTCTCAGGAACTGGTAGACAGCACGTGCGCAAGCGCATTAAAGTCGCA GAGATGGCGAGCGAGAAGGGACCTTCCTCAAGGCTGTCGCTGAGTAATGACGTAAGCCACC AGAAGCGGAGCTGAGGCCTAGATGTCCACTGCGGTTGCGCATTTTAGTCCCACTGCTCGCG GTAGCTGGGTGTTGGCTTTGCCTCTTCACTCTTCATATCCCAGCTAAAGTACCTCGG CTAAGAAGGCCAAAATAGATGTCCGCACCCCAGGGCCTGCCCACGTAGGTCCAGGGTTTTC AGCGTCAGCCTGGTTACGCGAAACGCGACGGATCCAACGATTTGTGTTCAATTTAACCGATC CCCGTTAAGTTGAGGAAACTCGGCCAACAGACCTATTTTATTGGTTTCGCTTGGCCCTCCAC CCCCACAGTACTGATCTTACAGATGGGAATCCTGTAATCTACCCATGACTGCNNNNNN >246

#### Table 4

GGGAAGACTCGGAAATTGGCACGTGTTGCTTGAAGGAACTGGTTCTCTCTTTGCGGGGGCC GCCGCTTGTTAAAGCTTAATTTTGCGGTGGGAATTAAGGCGAAGTTTACTCCCATTTTTTGTG GGAGTATATACAACTTATGGCCACGCCTGTGTCACATTCCCGTCTGGAGCTGGGACCATTG GTTAGTACCATCCTTCTTCGATACAAAACAGGGGGGCGCAAAATCCTAGGGGCGGAAAAT TACGCATTGTAAGAGGCGAAGAGTATAAAGAAGCACGGTAACCGGACAGACGGTCTTAGCA TGTTACTGAGCGCAAGCGCATAGTTCATGACCTAGTTGCCGTCTAGCACACAGTCGCACNN >247

NNNNCGCGGCCGCGTNCGACAGAAGACGACAGAAGGGTACGGCTGCGAGAAGAC GACAGAAGGGTACGCCCGAGGTAGGCGCGAGGCGCGGCGGAAGATGGCGGCG ACTACTATAGCAGCTCATCTAGTCAAGCAAGCCAACAAGAATATTTGCTGGGGAGTACTGC AGAAGAAAAAGCAATCGTTCAGCAGTGGTTAGAATACAGGGTCACTCAAGTAGATGGGCACT CCAGTAAAAATGACATCCACACACTGTTGAAGGATCTTAATTCATATCTTGAAGATAAAGTCT **ACCITACAGGGTATAACTTTACATTAGCAGATATACTATTGTACTATGGACTTCATCGCTTTAT** AGTTGACCTGACAGTTCAAGAAAAGGAGAAATATCTTAATGTGTCTCGCTGGTTTTGTCACAT TCAGCATTATCCAGGCATCAGGCAACATCTGTCTAGTGTTGTCTTCATCAAGAACAGACTATA TACTAATTCCCACTAGAAGCTGTCCATGCCATACAGAAGATCTATTAAAAAATGTTTTAAATGG TTGATAGAATTTTTGAAGTGTAAACTTGTGTCTGAATGTTTTATTTGTTCTTTAGCTGAAGTTTT GCAATTTTTATGTCAAAATTCAATTGCTATTAAACAAGTTGAGATCCAGTTATAAATTAACCTT AAGGGGGGGGGGGTAAAAAATTTCCCCGGGGGGGCCAAAGTTAATGACGTGACACCCG AAAGACCCCCTTCTTGTGGGGTGAATTGTGGACACACCTAGAGAGAATTTAAGCCAGGAAAT TAACTTAGGGTGTATGGTGGTAACGCGATATTGTGGAAAATTTGTCAGATTGTTGAAATANN >248

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TCCAAATAAGAACAAGGACACACATTGTGTCAGGTCACGAAGATCATTCAGTTTCCATATGCT GAAGGTTTTTCCACTATTCACACTCTGTGGCGTAACCTTCTTCAATATAACCCCAAATGTCAC CCAATCTATTTCTTCCAGCTTCTCTCTGGCCATCTTTTCCTTGATCTGAGCAGTCTGATCAG TTTTCGGCCGGTCATGTGTCTTCGTTCATATTCTCTGGAGGATACTCGAGCCCGCCTCGAGC CGCAGACCAGGAGAAGGCTTCCACACAGATGGCGATTGAGTCGTTTCCTCACAGAACTTTC ACTCGGGGTCCACCACATATTTGACCTCTAGTTATCCCACTAGGTTTGTTCCGAGAAATCGT CTGTAGGGGTTGGGAGGTGCACTTGTCATCCTTGAAGATGAGCTTTTGGGATCTGGAGGT GAAGCCTTTGGTGTTCGAGCCACCCTCTTGGTTCTTGGTAGCGCAGGGACATCAAGCTCCG CAGAAAAGCATGTTGACTCCTGAATTCTCTGAACTCTCCTCTCTTAAGAGGTGGCCGGGGA AGCTGCTCTTGTAAGGCCTTCATTTGCTCTTGCAAATTCCTTAATTCCTCTTGCAACTCTTCAT TCGTTTTCTCTCGCCTGGGGGCAGGAGCAGGGAGCCCTATTTTCAGTTGACTGTGATGC GGGAACTTCTTCATCTGTTAAGTCCTCCATATCTCCAAAGAGAGTGGCCAGATTTTCCTT TTCGTCTCTTGTCTCCTGTTTCTCCATCATCAGCCTCTTCTGTATAAGATTCACCGTCGCC GTCGGCATCAAAGAGCTCATCAAATGCGTCGGGCTCGCCATTTTCCCGCGTCAAGAAGTTAT TTTCTTCTGAATTACAATCCAAGGCTGACTCATTTTCTTCCAGCAGTGCGGTCAGCAGAGACA GATTGTCTTCCTCCTCATCCATGCTGTCAAGAGGACAGTTGTGACAGGAAACTTCGAAGGAG GCTCAGATGCCCAGATGAGCAATGTAGAATCTTGGCCGATGCCGGGACGCCTTCTTCGTTC **ACAGCTGAACCCGCCAAAATCGGACNN** >250

ACGCGGGGGGACGTAAGGTGGGGCGGTGAAAGAAGTTTGCTGACGAAGATGGC CTGCAGTTTTGTGATCTGCAATGATTCTTCCCTTCGAGGTCAGCCCATTATCTTTAATCCTGA CTTTTTTGTGGAGAAACTCCGACATGAGAAACCTGAGATTTTCACTGAGTTGGTGGTCAGCA ATATCACAAGGCTCATCGATTTACCTGGAACTGAGTTGGCTCAGCTGATGGGGGAAGTGGA CCTTAAGTTGCCTGGCGGGGCTGGCCCAGCATCAGGATTCTTCCGGTCTCTCATGTCTCTC **AAGCGAAAGGAAAAAGGAGTGATATTTGGGTCCCACTGACGGAGGAAGGCATTGCCCAGA** GGTAATAGTGTCCGACAGCAGATTTTAAGGGATGCTCTCAATAATGGAACTGACATTGACTT GGAATCAGGGGAATTTCACTCAAATGATGTTGCCACTTTGCTGAAGATGTTTCTAGGAGAGT TGCCGGAGCCTCTGCTGACACATAAACACTTCAATGCACACCTCAAAATCGCTGATTTGATG CAGTTTGATGATAAAGGAAACAAGACCAATATACCAGACAAGGACCGGCAAATTGAGGCTCT CCAGTTGCTCTCCTCCTCCTCCTAATCGTAATTTGCTGAAGTTATTGCTTGATCT CCTATACCAGACAGCAAAGAACAAGACAAGAACAAGATGTCAGCCTATAACCTTGCCCTTA TGTTTGCACCCCACGTCCTGTGGCCAAAAAATGTCACTGCAAATGACCTTCAGGAGAATATC ACAAAGTTAAACAGTGGGATGGCTTTTATGATTAAACACTCCCAGAAACTTTTTAAGGCTCCT GCTTATATTCGGGAGTGTGCGAGATTGCACTATTTGGGATCCAGAACTCAGGCATCAAAGGA TGACCTTGACCTCATAGCTTCATGTCATACTAAGTCCTTTCAGCTGGCAAAGTCTCAGAAACG GAACCGGGTAGATTCCTGCCCTCACCAGGAGGAGACCCAGCACCATACGGAAGAGGCACT GAGAGAGCTGTTTCAACACGTTCATGATATGCCAGAGTCAGCAAAGAAGAACAACTTATTA GACAGTTTAATAAGCAATCATTGACCCAGACACCAGGGCGAGAACCTTCTACTTCCCAGGTA CAAAAGAGGGCTCGTTCGCGCTCCTTCAGTGGGCTTATTAAGCGGAAGGTCCTGGGAAATC AGATGATGTCAGAAAAAGAAAAGAAGAACCCTACTCCAGAATCTGTGGCCATTGGTGAATTG AAGGGAACCAGCAAAGAAAATAGGAACTTATTATTTTCTGGCTCTCCAGCTGTCACGATGAC ACCAACAAGATTGAAGTGGTCTGAAGGGAAGAAGAGGGGGAAAAAAAGGATTTCTCTGAAGG ATCCAGAGTTGTCTCCTATGGTCCATGCAGAATTTTCTGTTTAGTGGGCAGGTGTTATTCCTG CCCACAGCAAAGCTTGGACTTGCAGCTTGCTGCATTTTGAATTGTCAAAGCCAACTAA TACCGTGACCCGACTGATACCTCTAACCCCACTCACTGGATGATGTTTGCAAGCTGTGCCTT CACTTTTGAAAAAAATATGAAATGTGTGCTCAACTGCCAGTAATTTTTTAAAAAGCACTGTCC CAGTGGATTGATGTTTTTAATGGATATTTTGGGTTTTTCTCTGTTTTGATAGTATTGGGTA AGATATCTTTCCCTCTTTTTCACTTTGAGCTTTGGGAAAACTCTTTATCTTATGAGGCTGTATT CCTCAATACCTAATTTGTGTCCAAAGAATTTATAGCTCTTCTGGACATTTTTTATTATTTCTTG GGTGTGACATCAGAGTATTTGACCTGCAGTATTGAAAAAGGAGAATTCAGAATGATACAGTA

#### Table 4

TCTCTCTCTTTCCCTTTCCTCAGTGATGTGAAAATAATTGTGTTTTGCTGAACTTGTTATCTTC ATTCAATTTCCTCTTGACTAAAACATCTCTGGTGCCAACGTAATACTTCTGAACCACATCACT GTGACTCAAGGAAAGTCACTGACAGCATAAGAGAAGTTTGCTAAAATATTTGTATGTGGGGG AAGCTCTGGAGTGTGCCTAGGAGGGGGCTGGCTTTATGTCCCAGGATGACTCTTTAT GGGTGGGATTACATTGCACCCTCTGAGGGTGCAGGCTAGACCGTCTCCTGAGAGGAAGTTA GGATCAGAAAGAAGCAAGCAGCAGCCTCTGCAGGGCTGACAGGATTTAAAGGAGAAAA TGTTCTTATTTGGAAGCAGCTGTGGCTTGTCACCAATGTTCAAGGAGTGTTACTGTTCCGCC CTCTCTTTGTCAGAAGGGACACAGGTGGTAATTTGGAGATGGGGCCAGAGCTTCTGGCTTTT GGATTTGGTGTTCACTTGTGTTGGATAGAGCAGTGGCATGGCTTTGACCTAGTATGAACT GGTGTCTGCCCAGAGAGCAGCATGTAGCAGGGGGGAATGCTCAGGTTTGTGCCTGGCTCT GTGGAGCTGTACAACCCTTCTCACCCTGTGGGTTGGAGCCGAGTCAGGCCACTATGGGGAA GCAGTTGCCCCACAAAATGTGGTTTGCTGACCTATTTCTAAACTGTTGAATATGCTGCACCAT TGCTGAAATGAAAGATGACTCTGGGGGGGGGCGGGGGCTTGGCCTTGTGCCCAGCTGGCAGCCC CCTCTGCCAGCCTTTCTGCTGCTTTTGCTGCTGTAACAGCAATAGTGGAGAAAAATGTAAAAT TTGGTCTTCCAGCTTAATGCAGTGTGAACAATAGATGGTTAGGAAAACAAAACTGCTTAGAA TAGGTTTCTATTCAATATTTGACTTTTTTTTTTCTTATTAAGAAAATGAAATCCCTTACACCAGAT **ATCAGTTAATTCAAACAGAAAACCCTTTGGGTATCANNNNN** 

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GGTTCTGAGGCCTTGCTTCTCTTTACTTTTCCACTCTAGGCCACGATGCCGCAGTACGCGGG GGGGTGAAGAAGGGGCCGGCCTTCAAGCAACAGCGACGCAAGATGGCAGCCACCACGGG CTCGGGAGTAAAAGTCCCTCGCAATTTCCGACTGTTGGAAGAACTCGAAGAAGGCCAGAAA GGAGTAGGAGATGGCACAGTTAGCTGGGGTCTAGAAGATGACGAAGACATGACACTTACAA GATGGACAGGGATGATAATTGGGCCTCCAAGAACAATTTATGAAAACCGAATATACAGCCTT AAAATAGAATGTGGACCTAAATACCCAGAAGCACCCCCCTTTGTAAGATTTGTAACAAAAATT AATATGAATGGAGTAAATAGTTCTAATGGAGTGGTGGACCCAAGAGCCATATCAGTGCTAGC AAAATGGCAGAATTCATATAGCATCAAAGTTGTCCTGCAAGAGCTTCGGCGCCCTAATGATGT CTAAAGAAAATATGAAACTCCCTCAGCCGCCGAAGGACAGTGTTACAGCAATTAATCAAAA AGAAAAACCACAGGCCCTTCCCCCTTCCCCCAATTCGATTTAATCAGTCTTCATTTTCCACAG TAGTAAATTTTCTAGATACGTCTTGTAGACCTCAAAGTACGGGGGGAAAATCCACAAGACAG **AATAGCCAGATCTCAGAGGAGCCTGGCTAAGCAAAACCCTGCAGAACGGCTGCCTAATTTA** CAGCAACCATGAGTACAAATGGTGATGATCATCAGGTCAAGGATAGTCTGGAGCAATTGAGA TGTCACTTTACATGGGAGTTATCCATTGATGACGATGAAATGCCTGATTTAGAAAACAGAGTC TTGGATCAGATTGAATTCCTAGACACCAAATACAGTGTGGGAATACACAACCTACTAGCCTAT GTGAAACACCTGAAAGGCCAGAATGAGGAAGCCCTGAAGAGCTTAAAAGAAGCTGAAAACT TAATGCAGGAAGAACATGACAACCAAGCAAATGTGAGGAGTCTGGTGACCTGGGGCAACTT TGCCTGGATGTATTACCACATGGGCAGACTGGCAGAAGCCCAGACTTACCTGGACAAGGTG GAGAACATTTGCAAGAAGCTTTCAAATCCCTTCCGCTATAGAATGGAGTGTCCAGAAATAGA

CTGTGAGGAAGGATGGGCCTTGCTGAAGTGTGGAGGAAAAAATTATGAACGGGCCAAGGCC TGCTTTGAAAAGGTGCTTGAAGTGGACCCTGAAAACCCTGAATCCAGCGCTGGGTATGCGA TCTCTGCCTATCGCCTGGATGGCTTTAAATTAGCCACAAAAAATCACAAGCCATTTTCTTTGC TTCCCCTAAGGCAGGCTGTCCGCTTAAATCCAGACAATGGATATATTAAGGTTCTCCTTGCC CTGAAGCTTCAGGATGAAGGACAGGAAGCTGAAGGAGAAAAGTACATTGAAGAAGCTCTAG CCAACATGTCCTCACAGACCTATGTCTTTCGATATGCAGCCAAGTTTTACCGAAGAAAAGGC TCTGTGGATAAAGCTCTTGAGTTATTAAAAAAGGCCTTGCAGGAAACACCCACTTCTGTCTTA CTGCATCACCAGATAGGGCTTTGCTACAAGGCACAAATGATCCAAATCAAGGAGGCTACAAA AGGGCAGCCTAGAGGGCAAAACAGAGAAAAGCTAGACAAAATGATAAGATCAGCCATATTTC ATTTTGAATCTGCAGTGGAAAAAAAGCCCACATTTGAGGTGGCTCATCTAGACCTGGCAAGA ATGTATATAGAAGCAGGCAATCACAGAAAAGCTGAAGAGAATTTTCAAAAATTGTTATGCATG AAACCAGTGGTAGAAGAAACAATGCAAGACATACATTTCCACTATGGTCGGTTTCAGGAATTT CAAAAGAAATCTGACGTCAATGCAATTATCCATTATTTAAAAGCTATAAAAAATAGAACAGGCA TCATTAACAAGGGATAAAAGTATCAATTCTTTGAAGAAATTGGTTTTAAGGAAACTTCGGAGA GAATGAAGCCCTGGAGTACTATGAGCGGGCCCTGAGACTGGCTGCTGACTTTGAGAACTCT GTGAGACAAGGTCCTTAGGCACCCAGATATCAGCCACTTTCACATTTCATTTTATGCT AACATTTACTAATCATCTTTTCTGCTTACTGTTTTCAGAAACATTATAATTCACTGTAATGATGT AATTCTTGAATAAATCTGACAAAATATTAGTTGTGTTCAACAATTAGTGAAACAGAATGTG TGTATGCATGTAAGAAAGAGAAATCATTTGTATGAGTGCTATGTAGTAGAGAAAAAATGTTAG TTAACTTTGTAGGAAATAAAACATTGGACTTACACGAAAtgtttaattcattcatttattgtgaaataaaaaataaaa tecttagetectecaceaactgaacagacectettggecaaggagaceceagaaacettaaaaactaagttteccaaceatgacaagat gagagatcattcacacctcattatattccctcccttgctaactgccattggactttttccactgagttaaacagaaaccca >255

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# Table 4

CGCGGTGGCGGCCGAGGTACTCTGACTTGCAGGGCCACAAGACCGGCCTTGCGAG CGTCGTTGGCTGATGGGAGTAGAAGCCACAGAGAGTCTTCCTCTTGGAGGTACAGTCAATT CTGAGGTTTGGGCGTCATAGACTAAACCCAGAAAACAGAACATTGGGAAGTCTTCGGAATAT TCTCTATCTTCTCACCAACGAGTAAGACGTTTTGGAATAATGGGACTCTACAAAGGCCTTGA AGCCAAACTGCTGCAGACAGTCCTCACTGCTGCTCTCATGTTCCTTGTTTATGAGAAACTGA CAGCTGCCACCTTCACAGTTATGGGGCTGAAGCGTGCACACCAACACTGAGACGCCTTCCC ATGAAAAATTCCGAAGATGCTCAAGAGGGAGGTTTCCTCCTGAGTGAAGAGAAGTGATTCTC CCTTGACTCTGGCTCCTGCCACCACAATGTTACCCTCATTGGCTTGAAAAGCATCCAAGGG TTGGGGTGGCAGTTGGACTAATGTGAAAAAAACATTGCTGAAAACCTAAAAATGACAGTTGT GAGTGTTTATTGGTTTTCTTAAGAGAAATGGACTATTTGCTCTCATGTGTAATGTTTTCTATTT AAATCTTTCTTAAATATACCAGCTGTTCTCTTTCCCTGAACTCTCCCCCAGGTTCTAGACAATT TAATAACATGTTATTCTTCTCAAATACTTTTGTCATGTCTCAAGTGTCGGTGTTTTTACTGCAC TTAAAAAGTAACATTTATGGGCTNTGCACGGGGCTGAACTTCATCTCGGTGGGCCTTTTATA CCGCTACGGGAAGGGGCCTCATGGGCTTTGCACCATTTTTTTGTGGGAATGAACACTGG TGCCCAATGGATTCTTTAAACATTGGCAGGTACATTTCACAGGGGAGAAAACTCCGATAGCT TGGAAACACCCGTATCACAACTGCGAGTGCGCTCACTCAACCGGTGAGGCAAATGGGCAAC **AAAAAAAAAGTGGCGGGCGCACATAN** >258

NNNNNNNNNAGGGAAAGCCTGCATGGGAAGTGGGAAGTTACTTCCCCCCTGCC CAAGGGGGACCCGGTCCATGTTGGCGGGGGTAANCCCNTCCCACCACCCNGCCCGGNG **GTTTAAATGCNGCCGGTTACAGGGGNGNGGTCCCCATTTCGCCCATTNCAGGGCTTGCGCC** AACNTGTTTTGGAAAAGGGCCNATTCGGGTGCGGGNCCCTTTTTTCGGCTTATTTTACGCCA AGCTGGGCGAAAAAGGGGGAATGTGCCTGCCAAGGGCGATTTAAGGTTGGGGTAACCGCC CAGGGTTTTTTACCAGTCAAAAACGTTTGTAAAACGNGGCCAGTGAAATTGTAATACGACGA NNNNNNNNNNNNNNNNNNNNNNNNNGGAAAGTGGCCCAGGCCCCCACGGACTGTTACAGAGG CGACGTCGCCGACCGCCAACATGGCGGCGCCCAGTGGCGTCCACCTGCTCGTCCGCAGAG GTTCTCATAGAATTTTCTCTTCACCACTCAATCATATCTACTTACACAAGCAGTCAAGCAGTC AACAAAGAAGAAATTTCTTTTTTCGGAGACAAAGAGATATTTCACACAGTATAGTTTTGCCGG CTGCAGTTTCTTCAGCTCATCCGGTTCCTAAGCACATAAAGAAGCCAGACTATGTGACGACA GGCATTGTACCAGACTGGGGAGACAGCATAGAAGTTAAGAATGAAGATCAGATTCAAGGGC TTCATCAGGCTTGTCAGCTGGCCCGCCACGTCCTCTTTGGCTGGGAAGAGTTTAAAGGTT GACATGACAACTGAAGAGATAGATGCTCTTGTTCATCGGGAAATCATCAGTCATAATGCCTAT CCCTCACCTCTAGGCTATGGAGGTTTTCCAAAATCTGTTTGTACCTCTGTAAACAACGTGCTC TGTCATGGTATTCCTGACAGTCGACCTCTTCAGGATGGAGATATTATCAACATTGATGTCACA GTCTATTACAATGGCTACCATGGAGACACCTCTGAAACATTTTTGGTGGGCAATGTGGACGA **ATGTGGTAAAAAGTTAGTGGAGGTTGCCAGGAGGTGTAGAGATGAAGCAATTGCAGCTTGC** AGAGCAGGGCCCCTTCTCTGTAATTGGAAACACAATCAGCCACATAACTCATCAGAATGG TTTTCAAGTCTGTCCACATTTTGTGGGACATGGAATAGGATCTTACTTTCATGGACATCCAGA **AATTTGGCATCATGCAAACGACAGTGATCTACCCATGGAGGAGGGCATGGCATTCACTATAG** AGCCAATCATCACGGAGGGATCCCCTGAATTTAAAGTCCTGGAGGATGCATGGACTGTGGT CTCCCTAGACAATCAAAGGTGTCGGCGCAGTTCGAGCACACGGTTCTGATCACGTCGAGGG GCGCGCAGATCCTGACCAACTACCCATGAGCTGAGGAGCCGCCGAAGCCCTCCAAGGCCA GACCGTTTGCTGCACTAGGAATTCGAGCTTGGGCCCCACTCGCCCAGACTGGCCCTTCTCG CATCGGGACCCGCGCTTGCACGCTGCAGGAGCCGCAAACGTCAGCTGTTCTGGAAACCGA GAGGTCCCAGAGAGAGAGATACGGGCGCATTTGAGAGCAAGGGCCTACTTGGCCGGGAC TGAAGCTTGCGAGACTAAGAGCCAGCTCATCTTTGTAACATTCATAATACGGGAAACTGAGG. ACCAGGTGGCTCGGAAAAGAGATGAGTTCCAGCTTTTACCTAACACAGGGTTCTCTCGTCGT CCCCCAACCCCTCCAGCTCGGCTTCTTTGTGTCCAGGGTTGTAGATTTTTGGATAGAGGTGT TTCTGATTCTACTGAACTGGCCGAAAACCTCACCCAGAGCCACTGGGATTCCAGCCAAGAGT

GGCTGCGGCTAACACCACCAGGACCTCCTGGTCCTGAGGTGACTCCAGTAGGCTCCATGAGGATCCCGGACCCTCAGGACAATGGGAGAGTTTTGTTTTCTCTCA

>259 >260 >261 >262 >263 >264

>265 >266 >267

CCCACGCGTCCGGTGAGACTTGCCTGCTCCTCTGGCCCCTGGTCCTGTCCTCTTCT CCAGCATGGTGTCTGAAGCTCCCTGGAGGCTCCAGCTTGGCAGCGTTGACAGTGACACT GATGGTGCTGAGCTCCCGACTGGCTTTCGCTGGGGACACCCGACCACGTTTCTTGGAGCTG CTTAAGTCTGAGTGTCATTTCTTCAATGGGACGGAGCGGGTGCGGTTCCTGGAGAGATACTT CCATAACCAGGAGGAGTTCGTGCGCTTCGACAGCGACGTGGGGGAGTACCGGGCGGTGAC GGAGCTGGGGCGCCTGTCGCCGAGTCCTGGAACAGCCAGAAGGACCTCCTGGAGCAGAA GCGGGGCCAGGTGGACAATTACTGCAGACACAACTACGGGGTTGTGGAGAGCTTCACAGT GCAGCGGCGAGTCCATCCTCaggGACTGTGTATCCTGCAAAGACCCAGCCCCTGCAggcACC ACAACctgctggtcTGTTCTGTGAGTGGTTTCTATCCAGGCAGCATTGAAGTCAGGTGGTTCCGG AATGGCCAGGAAGAGAAGACTGGGGTGTGTCCACAGGCCTGATCCACAATGGAGACTGG ACCTTCCAGACCCTGGTGATGCTGGAAACAGTTCCTCGGAGTGGAGAGGTTTACACCTGCC AAGTGGAGCACCCAAGCGTGACAAGCCCTCTCACAGTGGAATGGAGAGCACGGTCTGAATC TGCACAGAGCAAGATGCTGAGTGGAGTCGGGGGCTTTGTGCTGGGCCTGCTCTTCCTTGGG GCCGGGCTGTTCATCTACTTCAGGAATCAGAAAGGACACTCTGGACTTCAGCCAAGAGGATT CCTGAGCTGAAGTGCAGATGACACATTCAAAGAAGAACTTTCTGCCCCAGCTTTGCAGGATG AAAAGCTTTCCCTCCTGGCTGTTATTCTTCCACAAGAGAGGGCTTTCTCAGGACCTGGTTGC TACTGGTTCAGCAACTGCAGAAAATGTCCTCCCTTGTGGCTTCCTCAGCTCCTGCCCTTGGC CTGAAGTCCCAGCATTGGTGGCAGCGCCTCATCTTCAACTTTTGTGCTCCCCTTTGCCTAAA CCCTATGGCCTCCTGTGCATCTGTACCTGCCCgggcqgccGCTCGAGGTTGGTTCAAGCCTTC **GTTGACAGAGTTGCCCACGGTAACAACCTCTTCCCGAACCTTATGCCTCTGCTGGTCTTTCA** GTGCCTCCACTAtCCCGCGTACCtCGGCCGCCACCgcgtggaGCTCCAa

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>274

#### Table 4

>275 >276

NNGGAGCTCCCGCGGTGGCGGCTCGAGTACGCGGGGAGGCAGCGGAAAGCTCA GCCCATGTGAGGTGCCTCCTGCCAATCACAGACTACCCTTCCCTGGTCCTGGAGGTTCAAA GAATTGCAGGAGGGTAGAAAAGCACCTGGGTCGGGTGCAGACTGCGGAGCGGGCCCTACC GTGTGCGCAGAAAGAGGGGCGCTTGCCTTCAGCTTGTGGGAAATCCCGAAGATGGCCAAA GACAACTCAACTGTTCGTTGCTTCCAGGGCCTGCTGATTTTTGGAAATGTGATTATTGGTTGT **ACTGCTTGAAGCCACCGACAACGATGACATCTATGGGGCTGCCTGGATCGGCATATTTGTG** GGCATCTGCCTCTTCTGCCTGTTCTAGGCATTGTAGGCATCATGAAGTCCAGCAGGAA AATTCTTCTGGCGTATTTCATTCTGATGTTTATAGTATATGCCTTTGAAGTGGCATCTTGTATC ACAGCAGCAACACGAGACTTTTTCACACCCAACCTCTTCCTGAAGCAGATGCTAGAGAG CTTTTACGGACTTGGCTTGTTAGAAGGCTGAAAGATGATGGCAGGAATGAAAATCCAGCTTG TATGCATGCTACTCCTGGCTTTCAGCTCCTGGAGTCTGTGCTCAGATTCAGAAGAGGAAATG AAAGCATTAGAAGCAGATTTCTTGACCAATATGCATACATCAAAGATTAGTAAAGCACATGTT CCCTCTTGGAAGATGACTCTGCTAAATGTTTGCAGTCTTGTAAATAATTTGAACAGCCCAGCT GAGGAAACAGGAGAAGTTCATGAAGAGGAGCTTGTTGCAAGAAGGAAACTTCCTACTGCTTT AGATGGCTTTAGCTTGGAAGCAATGTTGACAATATACCAGCTCCACAAAATCTGTCACAGCA GGGCTTTTCAACACTGGGAGTTAATCCAGGAAGATATTCTTGATACTGGAAATGACAAAAAT GGAAAGGAAGAAGTCATAAAGAGAAAAATTCCTTATATTCTGAAACGGCAGCTGTATGAGAA TAAACCCAGAAGACCCTACATACTCAAAAGAGATTCTTACTATTACTGAGAGAATAAATCATT TATTTACATGTGATTGTGATTCATCATCCCTTAATTAAATATCAAATTATATTTGTGTGAAAATG TGACAAACACACTTATCTGTCTCTTCTACAATTGTGGTTTATTGAATGTGATTTTTCTGCACTA **ATATAAATTAGACTAAGTGTTTTCAAATAAATCTAAATCTTCAGCATGATGTGTTGTGTATAAT** TGGAGTAGATATTAATTAAGTCACCTGTATAATGTTTTGTAATTTTGCAAAACATATCTTGAGT TGTTTAAACAGTCAAAATGTTTGATATTTTATACCAGCTTATGAGCTCAAAGTACCTCGGCCG **CCACCGCGGTGAGCTCCAANNNN** >278

NNNNAGTCGACCACGCGTCCGGCAAGGCGTCCAGGAGTGACCTGGGGCTGTGGA
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ACTAAGGGCTTCAGTCTTGAAAGTTTTAGAGCCAAAGCATCTTCTCTTTCTGAAGAATTGAAA
CATTTTGCAGACGGACTGGAAACTGATGGAACTCTACAAAAATGTTTTGAAGATTCAAATGGA
AAAGCATCAGATTTTTCTTTGGAAGCATCTGTGGCTGAGATGAAGGAATACATAACAAAGTTT
TCTTTAGAACGTCAGACTTGGGATCAGCTCTTGCCTCACTACCAGCAGGAGGCTAAAGAGAT
ATTGTCCAGAGGATCAACTGAGGCCAAAATTACTGAGGTCAAAGTGGAACCTATGACATATC
TTGGGTCTTCTCAGAATGAAGTTCTTAATACAAAACCTGACTACCAGAAAATATTACAGAACC
AGAGCAAAGTCTTTGACTGTATGGAGTTGGTGATGAACTGCAAGGATCAATGAAACAG
CTGCAGGCCTTTATGGATGAAAGTAGCTGCCCGGGGCGAACGCCACCGCGGGGAGCTCCAN
>279

ACGCGGGGGGACGTAAGGTGGGGCGGTGAAAGAAGTTTGCTGACGAAGATGGC CTGCAGTTTTGTGATCTGCAATGATTCTTCCCTTCGAGGTCAGCCCATTATCTTTAATCCTGA CTTTTTTGTGGAGAAACTCCGACATGAGAAACCTGAGATTTTCACTGAGTTGGTGGTCAGCA ATATCACAAGGCTCATCGATTTACCTGGAACTGAGTTGGCTCAGCTGATGGGGGAAGTGGA CCTTAAGTTGCCTGGCGGGGCTGGCCCAGCATCAGGATTCTTCCGGTCTCTCATGTCTCTC AAGCGAAAGGAAAAAGGAGTGATATTTGGGTCCCCACTGACGGAGGAAGGCATTGCCCAGA GGTAATAGTGTCCGACAGCAGATTTTAAGGGATGCTCTCAATAATGGAACTGACATTGACTT GGAATCAGGGGAATTTCACTCAAATGATGTTGCCACTTTGCTGAAGATGTTTCTAGGAGAGT TGCCGGAGCCTCTGCTGACACATAAACACTTCAATGCACACCTCAAAATCGCTGATTTGATG CAGTTTGATGATAAAGGAAACAAGACCAATATACCAGACAAGGACCGGCAAATTGAGGCTCT CCAGTTGCTCCTCATTCTCCCTCCTCCTAATCGTAATTTGCTGAAGTTATTGCTTGATCT CCTATACCAGACAGCAAAGAACAAGACAAGACAAGATGTCAGCCTATAACCTTGCCCTTA TGTTTGCACCCCACGTCCTGTGGCCAAAAAATGTCACTGCAAATGACCTTCAGGAGAATATC ACAAAGTTAAACAGTGGGATGGCTTTTATGATTAAACACTCCCAGAAACTTTTTAAGGCTCCT GCTTATATTCGGGAGTGTGCGAGATTGCACTATTTGGGATCCAGAACTCAGGCATCAAAGGA TGACCTTGACCTCATAGCTTCATGTCATACTAAGTCCTTTCAGCTGGCAAAGTCTCAGAAACG GAACCGGGTAGATTCCTGCCCTCACCAGGAGGAGACCCAGCACCATACGGAAGAGGCACT GAGAGAGCTGTTTCAACACGTTCATGATATGCCAGAGTCAGCAAAGAAGAACAACTTATTA GACAGTTTAATAAGCAATCATTGACCCAGACACCAGGGCGAGAACCTTCTACTTCCCAGGTA CAAAAGAGGGCTCGTTCGCGCTCCTTCAGTGGGCTTATTAAGCGGAAGGTCCTGGGAAATC AGATGATGTCAGAAAAGAAAAAGAAGAACCCTACTCCAGAATCTGTGGCCATTGGTGAATTG AAGGGAACCAGCAAAGAAAATAGGAACTTATTATTTTCTGGCTCTCCAGCTGTCACGATGAC ACCAACAAGATTGAAGTGGTCTGAAGGGAAGAAGAGGGGGAAAAAAAGGATTTCTCTGAAGG ATCCAGAGTTGTCTCCTATGGTCCATGCAGAATTTTCTGTTTAGTGGGCAGGTGTTATTCCTG CCCACAGCAAAGCTTGGACTTGCAGCTTGCTGCATTTTGAATTGTCAAAGCCAACTAA TACCGTGACCCGACTGATACCTCTAACCCCACTCACTGGATGATGTTTGCAAGCTGTGCCTT CACTTTTGAAAAAAATATGAAATGTGTGCTCAACTGCCAGTAATTTTTTAAAAAGCACTGTCC CAGTGGATTGATGTTTTTAATGGATATTTTGGGTTTTTCTCTGTTTTGATAGTATTGGGTA AGATATCTTTCCCTCTTTTTCACTTTGAGCTTTGGGAAAACTCTTTATCTTATGAGGCTGTATT CCTCAATACCTAATTTGTGTCCAAAGAATTTATAGCTCTTCTGGACATTTTTTATTATTCTTG GGTGTGACATCAGAGTATTTGACCTGCAGTATTGAAAAAGGAGAATTCAGAATGATACAGTA TCTCTCTCTTTCCCTCAGTGATGTGAAAATAATTGTGTTTTGCTGAACTTGTTATCTTC ATTCAATTTCCTCTTGACTAAAACATCTCTGGTGCCAACGTAATACTTCTGAACCACATCACT GTGACTCAAGGAAAGTCACTGACAGCATAAGAGAAGTTTGCTAAAATATTTGTATGTGGGGG **AAGCTCTGGAGTGTGCCTAGGAGGGGGGGCTGGCTTTATGTCCCAGGATGACTCTTTAT** GGGTGGGATTACATTGCACCCTCTGAGGGTGCAGGCTAGACCGTCTCCTGAGAGGAAGTTA GGATCAGAAAGAAGCAAGCAGCCTCTGCAGGGCTGACAGGATTTAAAGGAGAAA TGTTCTTATTTGGAAGCAGCTGTGGCTTGTCACCAATGTTCAAGGAGTGTTACTGTTCCGCC CTCTCTTTGTCAGAAGGGACACAGGTGGTAATTTGGAGATGGGGCCAGAGCTTCTGGCTTTT GGATTTGGTGTCACTTGTGTTGGATAGAGCAGTGGCATGGCTTTGACCTAGTATGAACT GGTGTCTGCCCAGAGAGCAGCATGTAGCAGGGGGGGAATGCTCAGGTTTGTGCCTGGCTCT GTGGAGCTGTACAACCCTTCTCACCCTGTGGGTTGGAGCCGAGTCAGGCCACTATGGGGAA GCAGTTGCCCCACAAAATGTGGTTTGCTGACCTATTTCTAAACTGTTGAATATGCTGCACCAT TGCTGAAATGAAAGATGACTCTGGGGGAGCAGAGCTTGGCCTTGTGCCCAGCTGGCAGCCC CCTCTGCCAGCCTTTCTGCTGCTTTTGCTGCTGTAACAGCAATAGTGGAGAAAAATGTAAAAT TTGGTCTTCCAGCTTAATGCAGTGTGAACAATAGATGGTTAGGAAAACAAAACTGCTTAGAA

### Table 4

NNNNNGGCGCCGAGGTACGCGGGGGGAGACATGTGGAGTCCCAGCAGAGGCC
AACCTGTGTCTCTTCATCTCCCTGGGAAGGGTCCCCCGAAGTGAAAGAGATGGCCTGGTG
GAAAGCCTGGGAGAATGAATAAACAGACTAGGTTGAATCCATACAATGGAATGGTAGCAGAC
AATAAAAAGAAAATGAACTATTGATGCCCCCTACTGCACAGCAGAAGCTCTGAATCGTGTTC
CTGAATGAAAGAAGTCAGAGATGAAAAGATGGGCCAGGAGTCCAGTTTCTGGAAGGCCAAG
AATCGAAGTAGCAAGCTGCAGCCGTTTTCCAGACAAGCATGATGTGGGGATGCAGAAGAAT
TCAGGACTGGAGGGGCAAACTCCGATGTGACTGAGGCCCCACTGCCAAATGGCGGCATGC
TCAGATAGCACCCAAGAATTTGGGGAAAAAACTGGTGCTCACAGCN
>282

>283

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CGCGCGTGGGCGCCGCCGAGCCGAGGCCATGGTGCAGCAAACCAACAATGCCGAGAACA CGGAAGCGCTGCTGGCCGGCGAGAGCTCGGACTCGGGCGCCCGGCCTCGAGCTGGGAATC GCCTCCTCCCCACGCCCGGCTCCACCGCCTCCACGGGCGGCAAGGCCGACGACCCGAG CTGGTGCAAGACCCCGAGTGGGCACATCAAGCGACCCATGAACGCCTTCATGGTGTGGTCG CAGATCGAGCGCGCAAGATCATGGAGCAGTCGCCCGACATGCACAACGCCGAGATCTCC AAGCGGCTGGGCAAACGCTGGAAGCTGCTCAAAGACAGCGACAAGATCCCTTTCATTCGAG AGGCGGAGCGCTGCGCCTCAAGCACATGGCTGACTACCCGGACTACAAGTACCGGCCCA GGAAGAAGGTGAAGTCCGGCAACGCCAACTCCAGCTCCTCGGCCGCCGCCTCCTCCAAGC CGGGGGAGAAGGACAAGGTCGGTGGCAGTGGCGGGGGGCGCCATGGGGGCGGCGG TGGGGTTAGCAAACCGCACGCCAAGCTCATCCTGGCAGGCGGCGGCGGCGGCGGGAAAG CAGCGGCTGCCGCCGCCCTCCTTCGCCGCCGAACAGGCGGGGGCCGCCCCCCCTGCTG CCCCTGGGCGCCGCCGACCACCACTCGCTGTACAAGGCGCGGACTCCCAGCGCCTCG GCCTCCGCCTCCTCGGCAGCCTCCGCCAGCGCTCGCGGCCCCGGGCAAGCACCT GGCGGAGAAGAAGGTGAAGCGCGTCTACCTGTTCGGCGGCCTGGGCACGTCGTCGTCGCC CGTGGGCGCGTGGGCGCGGGGGCCCGACCCCAGCGACCCCCTGGGCCTGTACGAGGAGG AGGGCGCGGGCTGCCCGACGCGCCCAGCCTGAGCGGCCGCAGCAGCGCCGCCTCG TCCCCGCCGCCGCCGCCGCCGACCACCGCGGCTACGCCAGCCTGCGCGCCGC CTCGCCCGCCCCGTCCAGCGCGCCCTCGCACGCGTCCTCCTCGGCCTCGTCCCACTCCTC CTCTTCCTCCTCGGGCTCCTCGTCCTCCGACGACGAGTTCGAAGACGACCTGCTCGAC CTGAACCCCAGCTCAAACTTTGAGAGCATGTCCCTGGGCAGCTTCAGTTCGTCGTCGGCGC TCGACCGGGACCTGGATTTTAACTTCGAGCCCGGCTCCGGCTCGCACTTCGAGTTCCCGGA CTACTGCACGCCCGAGGTGAGCGAGATGATCTCGGGAGACTGGCTCGAGTCCAGCATCTC GAGAGGAGAAAAAAAAGTGAAAAAAAGAAACGAAAAGGACAGACGAAGAGTTTAAAGAGAA AAGGGAAAAAAGAAAAGTAAGCAGGGCTGGCTTCGCCCGCGTTCTCGTCGGCT CAAGGAGCGCGCGCGTTTTGGACCCGCGCTCCCATCCCCACCTTCCCGGGCCGGGGA CCCACTCTGCCCAGCCGGAGGACGCGGAGGAGGAGAGAGGGTAGACAGGGGCGACCTGT CTTTGCTTGAAGAGACCCCCCCCCCCCCCCAACGAGCTTCCGGACTTGTCTGCACCCCCAG CAAGAAGGCGAGTTAGTTTTCTAGAGACTTGAAGGAGTCTCCCCCTTCCTGCATCACCACCT TGGTTTTGTTTTATTTTGCTTCTTGGTCAAGAAAGGAGGGGGAGAACCCAGCGCACCCCTCCC CCCCTTTTTTAAACGCGTGATGAAGACAGAAGGCTCCGGGGTGACGAATTTGGCCGATGG CAGATGTTTTGGGGGAACGCCGGGACTGAGAGACTCCACGCAGGCGAATTCCCGTTTGGG GCTTTTTTTCCTCCCTCTTTTCCCCTTGCCCCCTCTGCAGCCGGAGGAGGAGATGTTGAGG GGAGGAGGCCAGCCAGTGTGACCGGCGCTAGGAAATGACCCGAGAACCCCGTTGGAAGCG TCAAACTGAAATGGATTTGCACGTTGGGGAGCTGGCGGCGGCGGCTGCTGGGCCTCCGCC TTCTTTTCTACGTGAAATCAGTGAGGTGAGACTTCCCAGACCCCGGAGGCGTGGAGGAGAG AAGAAAAACCGAAAGGAATGAAAAAAAAAAAGATTTTTTTCTTCTCTTAATCGGAATCGTGATG GTGTTGGATTATTTCAATGGTGGGGTTAATATAGCATGTTATCCTGTCTATCTTTTAAAGATTT CGCTATGTTTGATTCCTACAACGAAATTATCACCAGCTTTTTTTCATTCTTAACTCTTTAAAGG ATTCAAACGCAACTCAAATCTGTGCTGGACTTTAAAAAAACAATTCAGGACCAAATTTTTTCTC AGTGTGTGTTTATTCCTTATAGGTGTAAATGAGAAGACGTGTTTTTTTCCTTCACCGATGC TCCATCCTCGTATTTCTTTTTCCTTGTAAATGTAATCAGATGCCATTTTATATGTGGACGTATT TGTTACCCACGCCATTTTACGTCTCCCTTCACTGAAGGGCTAGAGTTTTAACTTTTAATTTTTTA GGATTATTTCCTCAGGGTATTTTGGTAACACAATATATAAGGGGGGTGTAATCGGGGTAACT CGCTGTTGGATTCCGGATTTCATAACAGCGCGGGGGGTTAATATCTCACACCGCTTTAGAAA ATCGAGCCCCTAATTTTCTCCATGGTGTAACCCTTCATTCTGCGGGGTTCTTCAAGGTTGAC AGATATCCCTTAACTGGCACCAAGGTTTTACCCTTCGGGCCCCGTTTTGTTTAAAGGCGCGG

# Table 4

GGGACATTGAGGCAACAAAGGTTGCGTTTTAGGAACACCACAGGCTTTTCGGAAATATGGC GCTGTCCAGAGGGTTAAATTGTGCGATCAGCCAAAGGGGTGTGGCTTAATGTGAACCCACT TTTGGCCNNNNNNNNN >285

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# Table 4

NNATGTGGTTACGACCCACTGTATTGAGGTGACGCGATCCATAGGCTGTGGTGTTT GTTTTCGCTGATCCACACAACGTTGGGGCACTGTCTATTCATGTGTTCAAGCTGAAGGCTC GTTCTCGGTTGTCATTTTACAGTGTTTTTCTACGGGGTTACATTACAGGAATGTTGTAGCGAC GTTTAGCCCGTGGAGTATCAACGTCTTGAGACTCCGTGTGAGACTCCCTGGTTTGTTCCACA ACAGTGTGTTTTTAGATTCCGTACCTTTGATTAAGGAACACATCATGCCGTGAAGCCAATTTA TATTCTGCAATTCCGTAGTGCATGTAATGTATTCTGCCGTCTCGTAGTGTGAAGCCATGCTTG GCACATCCAGTTCTTTGATGTCTGGCTGCCTTCTGCGGGCCAACTGTCTTGTGGAATTCGTT GCTCCCAGAGATAGCTTGAACTGCAGATCCCGCACAGCATTGCACTGAGCTGTCGTTGTATC TGAGCCTGGACATGGCGGCCGAGGTACTCACAGTCACGCAAATTCACAGTCTGCGTGCACG GCTCTCCATTCTTCTTCGGCTTTACAGGTTCCCAGGTCAAGAGCTTCACCCATAATTAAGA CCTTCTGAGGATGATCGATAGATAAACACCCTCCTCTGAACCATCCTTGGGCTTCATGGGG TTGGCATTGAGGATCCCTACGACAGTCCCCTGCTCCGTCTTCCAGAGCGCTTTGTGAACTTC TCCAAATAAGAACAAGGACACACTTGTGTCAGGTCACGAAGATCATTCAGTTTCCATATGCT GAAGGTTTTTCCACTATTCACACTCTGTGGCGTAACCTTCTTCAATATAACCCCAAATGTCAC CCAATCTATTTCTTCCAGCTTCTCTCTGGCCATCTTTTCCTTGATCTGAGACAGTCTGATCAG TTTTCGGCCGGTCATGTCTTCGTTCATATTCTCTGGAGGATACTCGAGCCCGCCTCGAGC CGCAGACCAGGAGAAGGCTTCCACACAGATGGCGATTGAGTCGTTTCCTCACAGAACTTTC ACTCGGGGTCCACCACATATTTGACCTCTAGTTATCCCACTAGGTTTGTTCCGAGAAATCGT CTGTAGGGGTTGGGAGGTGCACTTGTCATCCTTGAAGATGAGCTTTTGGGATCTGGAGGT GAAGCCTTTGGTGTTCGAGCCACCCTCTTGGTTCTTGGTAGCGCAGGGACATCAAGCTCCG CAGAAAAGCATGTTGACTCCTGAATTCTCTGAACTCTCCTCTCCTTAAGAGGTGGCCGGGGA AGCTGCTCTTGTAAGGCCTTCATTTGCTCTTGCAAATTCCTTAATTCCTCTTGCAACTCTTCAT TCGTTTTCTCTCGCCTGGGGGCAGGAGCAGGGAGGACCCTATTTTCAGTTGACTGTGATGC GGGAACTTCTTCATCTGTTAAGTCCTCCATATCTCCAAAGAGAGTGGCCAGATTTTCCTT TTCGTCTCTTGTCTCCCTGTTTCTCCATCATCAGCCTCTTCTGTATAAGATTCACCGTCGCC GTCGGCATCAAAGAGCTCATCAAATGCGTCGGGCTCGCCATTTTCCCGCGTCAAGAAGTTAT TTTCTTCTGAATTACAATCCAAGGCTGACTCATTTTCTTCCAGCAGTGCGGTCAGCAGAGACA GATTGTCTTCCTCCTCATCCATGCTGTCAAGAGGACAGTTGTGACAGGAAACTTCGAAGGAG GCTCAGATGCCCAGATGAGCAATGTAGAATCTTGGCCGATGCCGGGACGCCTTCTTCGTTC ACAGCTGAACCCGCCAAAATCGGACNN >288

>289 NAGTCGCGCGCGGTGCAGTCGGGAGGTGGAGGCACCGGCTGCATTGTTTTCGGGA TCGAGGGGTGAGGGCGCTATGGCACCCGGCTGCAAAACTGAGTTACGCAGCGTGACAAAT GGTCAGTCTAACCAACCAAGTAATGAAGGTGATGCCATCAAAGTTTTTGTGCGAATTCGTCC TCCTGCAGAAAGATCTGGGTCAGCTGATGGAGAGCAGAACTTATGCTTATCTGTGCTGTCCT CCACGAGTCTCCGGCTGCACCCCAACCCTGAGCCCAAGACCTTCACGTTTGATCATGTTGCA GATGTGGATACCACTCAGGAATCTGTATTTGCAACTGTGGCTAAAAGCATTGTGGAGTCTTG CATGAGCGGTTATAATGGTACCATCTTTGCATATGGACAGACTGGCTCAGGGAAGACATTTA CTATGATGGGACCATCTGAATCTGATAATTTTTCTCATAACCTGAGAGGAGTAATCCCACGAA GTTTTGAATATTTGTTTTCCTTAATTGATCGTGAAAAAGAAAAGGCTGGAGCTGGAAAGAGTT TCCTTTGTAAGTGTTCCTTTATTGAAATCTACAACGAGCAGATATATGATCTACTGGACTCTG CATCGGCTGGACTGTACTTAAGGGAGCATATCAAGAAGGGAGTCTTTGTTGTTGGTGCGGT GGAGCAGGTGGTAACCTCAGCTGCTGAAGCCTATCAGGTGCTGTCTGGAGGATGGAGGAAT AGACGTGTGGCATCAACATCAATGAACAGAGAATCGTCTAGGTCTCATGCCGTCTTTACAAT TACAATAGAGTCAATGGAGAAAAGTAATGAGATTGTGAATATACGGACCTCCCTACTCAACCT GGTGGATTTAGCAGGATCTGAAAGGCAAAAAGATACCCATGCAGAAGGGATGAGATTGAAG GAAGCAGGTAACATAAATCGATCATTGAGCTGCCTGGGCCAAGTGATTACAGCACTTGTCGA CGTGGGTAATGGAAAACAGAGACATGTTTGCTACAGAGACTCCAAACTTACCTTCTTACTAC

# Table 4

GGGATTCCCTTGGAGGTAATGCCAAAACAGCCATAATTGCAAATGTTCATCCTGGATCCAGG TGTTTTGGGGAAACCCTATCAACACTTAACTTTGCTCAAAGAGCCAAGCTGATTAAAAACAAG GCAGTAGTAAATGAAGACACCCAAGGAAATGTGAGCCAGCTCCAAGCTGAAGTGAAGAGGC TCAAAGAACAACTGGCGGAGCTTGCTTCAGGACAGACACCACCAGAAAGCTTCCTGACCAG AGACAAAAAGAAGACTAACTATATGGAGTATTTCCAGGAAGCAATGTTATTCTTTAAGAAATC TGAACAGGAAAAGAAGTCTCTGATAGAAAAAGTTACCCAATTAGAAGACCTCACCCTCAAAA AGGAAAAATTTATTCAATCTAATAAAATGATTGTGAAATTCCGAGAGGATCAAATAATACGCTT GGAAAAGCTCCACAAGGAATCCCGGGGAGGTTTTCTGCCTGAGGAGCAGGATCGTTTGCTC TCAGAATTAAGGAATGAGATTCAAACTCTGCGAGAACAAATAGAGCACCACCCCAGAGTTGC AAAGTATGCTATGGAAAATCATTCCCTCAGGGAGGAGAATAGAAGACTGAGATTATTAGAGC CTGTGAAAAGAGCTCAAGAAATGGATGCCCAGACCATTGCAAAACTAGAAAAAGCTTTCTCT GAAATAAGTGGCATGGAGAAAAGTGACAAAAATCAGCAAGGATTTTCACCTAAAGCTCAGAA AGAGCCATGTTTGCTTTGCAAACACTGAGAAGTTAAAAGCACAACTCCTGCAAATTCAGACAG AGCTGAATAATTCAAAGCAAGAATATGAAGAATTCAAAGAACTTACTAGGAAAAGGCAGCTA GAATTGGAATCAGAGCTTCAGTCTTTGCAAAAAGCGAACCTTAATCTTGAAAACCTTTTGGAA GCAACAAAAGCCTGCAAGCGGCAAGAAGTTTCTCAGCTGAATAAAATTCATGCTGAAACACT TAAGATTATAACTACACCAACCAAGGCCTACCAACTTCATTCCCGACCAGTACCAAAATTAAG CCCTGAAATGGGAAGCTTTGGCTCTCTATACACTCAGAATTCTAGCATATTAGATAATGATAT ATTAAATGAGCCAGTTCCTCCTGAGATGAATGAACAAGCTTTTGAGGCCATTTCTGAAGAGC TTAGAACAGTGCAGGAACAAATGAGTGCTCTTCAAGCCAAACTGGATGAAGAAGAGCATAAA AACCTAAAGCTTCAGCAGCATGTTGACAAACTGGAACATCATTCTACCCAAATGCAGGAGCT TTTCTCATCAGAAAGAATTGATTGGACCAAACAGCAGGAAGAGCTTCTCTCACAGTTGAATGT CCTTGAAAAGCAGCTTCAAGAGACTCAAACTAAAAATGACTTTTTGAAAAGTGAGGTACATGA CCTGCGAGTAGTCCTTCATTCTGCTGACAAGGAGCTTTCTTCAGTGAAATTGGAATATAGTTC ATTCCTATGACAACTTACAAGAAATAATGAAATTTGAGATTGACCAACTTTCAAGAAACCTCC AAAACTTCAAAAAAGAAAATGAAACTCTGAAATCTGATCTGAATAATTTGATGGAGCTTCTTG AGGCAGAAAAAGAACGCAATAACAAATTATCATTACAGTTTGAAGAAGATAAAGAAAACAGTT CTAAAGAAATCTTAAAAGTTCTTGAGGCTGTACGTCAGGAGAAACAGAAAGAGACGGCCAAG GATCAGTTCCCTGGAAAAGTCTAGAGATTCTGATAAGAAAGTTGTAGCTGACCTCATGAACC AGATCCAGGAGCTAAGAACATCGGTCTGTGAGAAAACAGAAACTATAGACACCCTGAAACAA TTTCTGAGGACATAGAGAGGGATATGCTCTGTGAGGACCTGGCTCATGCCACTGAGCAGCT GAACATGCTCACAGAGGCCTCAAAAAAACACTCGGGGCTGCTGCAGTCTGCCCAGGAAGAA **AAGTAGAACAGAAGAATGAATATAACTTCAAAATGAGGCAACTAGAACATGTGATGGATT** CTGCTGCTGAGGATCCCCAGAGTCCTAAGACACCACCTCACTTTCAAACACATTTGGCAAAA CTCCTGGAAACACAGAACAAGAGATAGAAGATGGAAGAGCCTCTAAGACTTCTTTGGAACA CCTTGTAACAAAGCTAAATGAAGACAGAGAAGTCAAAAATGCTGAAATCCTCAGAATGAAGG AGCAGTTGCGTGAAATGGAAAACCTACGCCTGGAAAGTCAGCAGTTAATAGAGAAAAACTGG CTCCTGCAAGGTCAGCTGGATGATATTAAAAGACAAAAGGAAAACAGTGATCAGAATCATCC AAATAGTTGAAGAAATGCTGAAAATGAAAGCAGACCTAGAAGAAGTCCAAAGTGCCCTTTAC AGAGAACATCCCAGGAGATGGAAATGTTAAGGAAGCAGGTGGAGTGTCTTGCTGAGGAAAA TGGAAAGTTGGTAGGTCACCAAAATTTGCATCAGAAGATTCAGTACGTAGTGCGACTAAAGA AGGAAAATGTCAGGCTTGCTGAGGAGACAGAAAAGTTGCGTGCCGAAAATGTATTTTTAAAA GAAAAGAAAGAAGTGAATCTTGAGGATTCCGGTCAGCTACCTAGGCATCACCTTGTTTGAA GATGTTTCTCTTTTACAAGTAAGACCTACTCCTGGCCACTTAGGAGAGCTGAATTTATGG ACCTTAATTATTAAATGTTTATAAGGTGGTGGTAACCACCTCAAGTTTCTGATGAACATTCTG CATCCATATACACCCTGTGACAGTCAGCAGTCTGCTATTAAGTGGCCTACTTCAAGGCTTTG AATCAACTTAAGGGAAAACCTTTTGTCTTTGTAAAAATAAAAGCCTGTAGCTAAGGTTTACAG

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# Table 4

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>297

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AACTCTCAAGATAAAAGCATTGAAAAACATGGCAGTAGTAAAATAGAAACAATGAATAAGTCT CCTCATATCTCTAATTGCAGTGTAGCCAGTGATTATTTAGATTTGGATAAGATTACTGTGGAA GATGATGTTGGTGGTGTTCAAGGGAAAAGAAAGCAGCATCTAAAGCTGCAGCACAGCAGA GGAAGATTCTTCTGGAAGGCAGTGATGGTGATAGTGCTAATGACACTGAACCAGACTTTGCA CCTGGTGAAGATTCTGAGGATGATTTTTGTGAGAGTGAGGATAATGACGAAGACTT AGAAAAGAAAGAGAAATCTAAATCCAAATGTAATGCTTTGGTGACTTCGGTGGACTCTG CTCCAGCTGCCGTCAAATCAGAATCTCAGTCCTTGCCAAAAAAGGTTTCTCTGTCTTCAGATA CCACTAGGAAACCATTAGAAATACGCAGTCCTTCAGCTGAAAGCAAGAAACCTAAATGGGTC CCACCAGCGGCATCTGGAGGTAGCAGAAGTAGCAGCAGCCCACTGGTGGTAGTGTCTGTG AAGTCTCCCAATCAGAGTCTCCGCCTTGGCTTGTCCAGATTAGCACGAGTTAAACCTTTGCA CTTTACAAGGGTGTTTATATTTGATTTGTGTTTATATTTGAGGCAGGTATTGTAATATAAAGGA ATCCATTACCATGTCCTATAAATGACCTCTAGCCATTTTATGATTATGTTCTCTGTAAAACTCT TCAAGACTTCAATGAGAAGTTTGTTTATAAGAATTATCTTCTCATACCTTTCCTTGTGAAGAGC GTATTCTGTTTTCTATCAGTTCGACATGAAGTCCACATCACATGCTGTTCTTTTCTAGTTACA TGATGTGCCTTTCTAGCTTTGTCTAGTTTATAGCACCTTAACTTTAACTGTTCAGTTTTATCTG GCAGAGGAAAACATTCTTATTTCTTTCAGAAGACATTTCTGAAATCTTATAAGCTACTTAAGCT ACGTTGTCAGTTTTATCGCAAAGATGTTTTGTATTTTAGCCAAATCTTTTTATAGTACAAACTT AGAATTATTTTACACACTAAAATGGTTGCAGTTTTATGGCATATGTCTCCGATTTAGATGGTTA TTCTCTAGAAAATAGTATTTAAAGACATTTTATGAAATCTTCATTGTCAAAACCTTTAATAAAAG TGGAAATATTTGAAATGCCCTTTTTCTTGATACCACTCATCCACGTGTTCCTGATTTGTCCAC ATTTCATGATAAAATGAGAGCTCTGCAGAGAATGTTAGCCTTTCTGTGTAAATGTAATCTTCA AGTAGTCACTTTTGTTAAGTTCTTTAGAAAGTAGTTGTCAAGTACTTAGTCATCCCTATTATGA TATGAGATAGTACAGTTTTCAGGAAGCTTAGATCTGAATTATTGTGAAAAAACAATGGTATGAA TATTITATATTTACATGAGAATTAATAGTTCTGATCAATTTTATAAAAATTTTCAATTCATGTAG GTGTTAAAATGTTATAACTCAGTTTCTGGTTATGACTATCTTTTTAGGGAACTATATTAGAATG GGTAGTGGCTTGTTAAAAAAAAAAAAAAAAAAAATTGGGCGCGGCCGAAATTAAACGTGGGG GCCGAGAAAGGACGCGGAACGCATCAGGGTCACAAAGCGGCGCGGAACAGGGGGTCGT TAGCAGCAGCCN >298

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NNACTATAGTGAATTTGGCCCTCGAGGCCAAGAATTCGGCACGAGGCTTAAATGTCT GACTTCAGAATTGCATACGCCATCTGTTTTATTGACCCAACACAGTTTTAAATATTTTCATCCC

# Table 4

ACGCGGGGGGACGTAAGGTGGGGCGTGAAAGAAGTTTGCTGACGAAGATGGC CTGCAGTTTTGTGATCTGCAATGATTCTTCCCTTCGAGGTCAGCCCATTATCTTTAATCCTGA CTTTTTTGTGGAGAAACTCCGACATGAGAAACCTGAGATTTTCACTGAGTTGGTGGTCAGCA ATATCACAAGGCTCATCGATTTACCTGGAACTGAGTTGGCTCAGCTGATGGGGGAAGTGGA CCTTAAGTTGCCTGGCGGGGCTGGCCCAGCATCAGGATTCTTCCGGTCTCTCATGTCTCTC AAGCGAAAGGAAAAAGGAGTGATATTTGGGTCCCCACTGACGGAGGAAGGCATTGCCCAGA **GGTAATAGTGTCCGACAGCAGATTTTAAGGGATGCTCTCAATAATGGAACTGACATTGACTT** GGAATCAGGGGAATTTCACTCAAATGATGTTGCCACTTTGCTGAAGATGTTTCTAGGAGAGT TGCCGGAGCCTCTGCTGACACATAAACACTTCAATGCACACCTCAAAATCGCTGATTTGATG CAGTTTGATGATAAAGGAAACAAGACCAATATACCAGACAAGGACCGGCAAATTGAGGCTCT CCAGTTGCTCTCCTCCTCCTCCTCCTAATCGTAATTTGCTGAAGTTATTGCTTGATCT CCTATACCAGACAGCAAAGAACAAGACAAGAACAAGATGTCAGCCTATAACCTTGCCCTTA TGTTTGCACCCCACGTCCTGTGGCCAAAAAATGTCACTGCAAATGACCTTCAGGAGAATATC ACAAAGTTAAACAGTGGGATGGCTTTTATGATTAAACACTCCCAGAAACTTTTTAAGGCTCCT **GCTTATATTCGGGAGTGTGCGAGATTGCACTATTTGGGATCCAGAACTCAGGCATCAAAGGA** TGACCTTGACCTCATAGCTTCATGTCATACTAAGTCCTTTCAGCTGGCAAAGTCTCAGAAACG GAACCGGGTAGATTCCTGCCCTCACCAGGAGGAGACCCAGCACCATACGGAAGAGGCACT GAGAGAGCTGTTTCAACACGTTCATGATATGCCAGAGTCAGCAAAGAAGAACAACTTATTA GACAGTTTAATAAGCAATCATTGACCCAGACACCAGGGCGAGAACCTTCTACTTCCCAGGTA CAAAAGAGGGCTCGTTCGCGCTCCTTCAGTGGGCTTATTAAGCGGAAGGTCCTGGGAAATC AGATGATGTCAGAAAAGAAAAAGAAGAACCCTACTCCAGAATCTGTGGCCATTGGTGAATTG AAGGGAACCAGCAAAGAAAATAGGAACTTATTATTTTCTGGCTCTCCAGCTGTCACGATGAC ACCAACAGATTGAAGTGGTCTGAAGGGAAGAAGAGGGGAAAAAAGGATTTCTCTGAAGG ATCCAGAGTTGTCTCCTATGGTCCATGCAGAATTTTCTGTTTAGTGGGCAGGTGTTATTCCTG CCCACAGCAAAGCTTGGACTTGCAGCTTGCTGCTGCATTTTGAATTGTCAAAGCCAACTAA TACCGTGACCCGACTGATACCTCTAACCCCACTCACTGGATGATGTTTGCAAGCTGTGCCTT CACTTTTGAAAAAAATATGAAATGTGTGCTCAACTGCCAGTAATTTTTTAAAAAGCACTGTCC CAGTGGATTGATGTTTTTAATGGATATTTTGGGTTTTTCTCTGTTTTGATAGTATTGGGTA AGATATCTTTCCCTCTTTTTCACTTTGAGCTTTGGGAAAACTCTTTATCTTATGAGGCTGTATT CCTCAATACCTAATTTGTGTCCAAAGAATTTATAGCTCTTCTGGACATTTTTTATTATTTCTTG GGTGTGACATCAGAGTATTTGACCTGCAGTATTGAAAAAGGAGAATTCAGAATGATACAGTA TCTCTCTTTCCCTTTCCTCAGTGATGTGAAAATAATTGTGTTTTGCTGAACTTGTTATCTTC ATTCAATTTCCTCTTGACTAAAACATCTCTGGTGCCAACGTAATACTTCTGAACCACATCACT **GTGACTCAAGGAAAGTCACTGACAGCATAAGAGAAGTTTGCTAAAAATATTTGTATGTGGGGG AAGCTCTGGAGTGTGCCTAGGAGGGGGCTGGCTTTATGTCCCAGGATGACTCTTTAT** GGGTGGGATTACATTGCACCCTCTGAGGGTGCAGGCTAGACCGTCTCCTGAGAGGAAGTTA GGATCAGAAAGAAGCAAGCAGCAGCCTCTGCAGGGCTGACAGGATTTAAAGGAGAAA TGTTCTTATTTGGAAGCAGCTGTGGCTTGTCACCAATGTTCAAGGAGTGTTACTGTTCCGCC CTCTCTTTGTCAGAAGGGACACAGGTGGTAATTTGGAGATGGGGCCAGAGCTTCTGGCTTTT GGATTTGGTGTTCACTTGTGTTGGATAGAGCAGTGGCATGGCTTTGACCTAGTATGAACT GGTGTCTGCCCAGAGAGCAGCATGTAGCAGGGGGGAATGCTCAGGTTTGTGCCTGGCTCT GTGGAGCTGTACAACCCTTCTCACCCTGTGGGTTGGAGCCGAGTCAGGCCACTATGGGGAA GCAGTTGCCCCACAAATGTGGTTTGCTGACCTATTTCTAAACTGTTGAATATGCTGCACCAT

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#### Table 4

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CGACCCACGCGTCCGCGCAATCCGTCGCGGAACCTGTCTTCTGTCTTTACCCAGA GCTACCATGAGCAAGCGGAACCAGGTATCGTACGTGCGGCCAGCCGAGCCGGCGTTTCTG GCCCGCTTCAAGGAACGGGTCGGCTACAGGGAGGGACCCACCGTAGAGACTAAGAGAATT CAGCCTCAGCCCCCAGATGAAGATGGGGATCACAGTGACAAAGAAGATGAACAGCCTCAAG TGGTGGTTTTAAAAAAGGGAGACCTGTCAGTTGAAGAAGTCATGAAAAATTAAAGCAGAAATA AAGGCTGCCAAAGCAGATGAAGAACCAACTCCAGCCGATGGAAGAATCATATATCGAAAACC AGTCAAGCATCCCTCAGATGAAAAATATTCAGGTTTAACAGCAAGCTCAAAAAAAGAAGAAGC CAAATGAAGATGAAGTAAATCAGGACTCGGTCAAAAAGAACTCACAAAAAACAAATTAAAAATA GTÁGCCTCCTTTCTTTTGACAACGAAGATGAAAATGAGTAAAGTGTAAATATTTTGAATTTAGTC TACTTTGAAAGTATATGGAGTGTTCATTAAAATCACATTTTTTCCTATTATAAAGATACTACAA CCCCTCTGACTTAAAATGCCAACTCTATAGAAATTAGCTAGTATTAACATTTTGTTATTTCCCT TGTGTGGTTGTATATATGTAAATTATATTTTTAAGCAAAATACATTTTTTGTGTGTAAACAAA ATTTTATAAATACAACTGTATTGCAAATGTTCTTTGTCCTGCTTCTCACTTGACATTGCATTAT GAGTATTCTTCCAGGTCAGTAAATTTCAAAAACCTGACATTAATAGCTACAGATAATTTCATAA CCTTGTTAAAAATACCTCCCCAACTCCTGCTAAGGGTGGCCATGAGACTCAGCTCTGGCAAG TTAAGAAATACAGGTGGAATTCTGCTTGATAAAGCTGCTGGGTTTTTTGTTACAAAAGGACAG ACTTGGCAAACATGAGCCTTTGCTCTTATCTTTTCATCCTACTTGGAGTGCAGAGATAAAACC TGAGTACCTGCCGGGCGACCGCCACCGCGTGGAGCTCCAA >306

NNGGAGCTCCCGCGGTGGCGGCTCGAGTACGCGGGGAGGCAGCGGAAAGCTCA GCCCATGTGAGGTGCCTCCTGCCAATCACAGACTACCCTTCCCTGGTCCTGGAGGTTCAAA GAATTGCAGGAGGGTAGAAAAGCACCTGGGTCGGGTGCAGACTGCGGAGCGGGCCCTACC GTGTGCGCAGAAAGAGGGGGCGCTTGCCTTCAGCTTGTGGGAAATCCCGAAGATGGCCAAA GACAACTCAACTGTTCGTTGCTTCCAGGGCCTGCTGATTTTTGGAAATGTGATTATTGGTTGT TGCGGCATTGCCCTGACTGCGGAGTGCATCTTCTTTGTATCTGACCAACACACCCCTCTACCC **ACTGCTTGAAGCCACCGACAACGATGACATCTATGGGGCTGCCTGGATCGGCATATTTGTG** GGCATCTGCCTCTTCTGCCTGTCTGTTCTAGGCATTGTAGGCATCATGAAGTCCAGCAGGAA AATTCTTCTGGCGTATTTCATTCTGATGTTTATAGTATATGCCTTTGAAGTGGCATCTTGTATC ACAGCAGCAACACGAGACTTTTTCACACCCAACCTCTTCCTGAAGCAGATGCTAGAGAG CTTTTACGGACTTGGCTTGTTAGAAGGCTGAAAGATGATGGCAGGAATGAAAATCCAGCTTG TATGCATGCTACTCCTGGCTTTCAGCTCCTGGAGTCTGTGCTCAGATTCAGAAGAGGAAATG AAAGCATTAGAAGCAGATTTCTTGACCAATATGCATACATCAAAGATTAGTAAAGCACATGTT CCCTCTTGGAAGATGACTCTGCTAAATGTTTGCAGTCTTGTAAATAATTTGAACAGCCCAGCT GAGGAAACAGGAGAAGTTCATGAAGAGGAGCTTGTTGCAAGAAGGAAACTTCCTACTGCTTT AGATGGCTTTAGCTTGGAAGCAATGTTGACAATATACCAGCTCCACAAAATCTGTCACAGCA GGGCTTTTCAACACTGGGAGTTAATCCAGGAAGATATTCTTGATACTGGAAATGACAAAAAT GGAAAGGAAGAAGTCATAAAGAGAAAAATTCCTTATATTCTGAAACGGCAGCTGTATGAGAA TAAACCCAGAAGACCCTACATACTCAAAAGAGATTCTTACTATTACTGAGAGAATAAATCATT TATTTACATGTGATTGTGATTCATCATCCCTTAATTAAATATCAAATTATATTTGTGTGAAAATG <u>TGACAAACACACTTATCTGTCTCTTCTACAATTGTGGTTTATTGAATGTGATTTTTCTGCACTA</u> ATATAAATTAGACTAAGTGTTTTCAAATAAATCTAAATCTTCAGCATGATGTGTTGTGTATAAT TGGAGTAGATATTAATTAAGTCACCTGTATAATGTTTTGTAATTTTGCAAAACATATCTTGAGT

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# Table 4

TGTTTAAACAGTCAAAATGTTTGATATTTTATACCAGCTTATGAGCTCAAAGTACCTCGGCCG CCACCGCGGTGAGCTCCAANNNN >307

NNCTGTCCATCAAGAGTCCAAATTCCTGGTTTGAGTTTTCAGGAAATGTGCACAGAG GGAGTAACGTCATGCGCAAGGTACCCCAGAGTGTGTAATCTTAGGTAAGCCATCCCAGCATT TCTGCACATGTTGATAGGGAACTGAAGACTGTTTGGACTTGCTCGATCTTGCCCACCTTCTC CAACCCTCACGCAGAGATTCCAATCAAAAGTCCAGCTCTGTGCCATGTGCCAATTGTCATCG GAATGTGGTCATACCTCTGGTGGTGCTTTCAGAATATCAGTGCCAACAGTATGACAGGGATA AGCATGGTTTCCAAGGTCTATATATGAGGTCTACTGGGAACACTTCCATACCCAAACCCCTC TGAATGCCATAAACCACATTATGAAGTCCTTTACTGTCACGAATTTGAAACTCCAGGATGGTC ACTTTCTACATTGCCATGTGTGTGCCTGTGCTCCATCACTTTTATCTTTCCCATCACTCCAGA TCCCACTGCCCGGAGCAGAAATACTCTGTAATGGAATGCCATACTGTTAACCCTGAATGAGT TCGAGCCATCATTCCCAAAACCCTTGCAACCTGGGCAGCTGTGACCTCCCGAACACCAACG TGCACGATTATATTGCGACATTCTTCAATACTTGCACAAAAGCCATAGCCTACGTTCTTGCAT TGTCCATTAGAATGTCCCGTTTTTCAGGGTATAAAAGTGGTGCGAGCACCACGGGACAGCGT TCTTGGGGAAAATCTCTGCGCAGCGTCTTAAGAAAAGCGTCTATCTGTTCTTGTCCAACTCC ATATCTTGGAAGCCACCTTCTTGATTTCCACTGACGTCTGCGTCAATGTAAGAACGCAGAAG ATCTGGAAGCTTCTGTTTGATAAACTGGGCAGCGAAACCTCTAAGATCTGAGCTGGAAGAAT TCAACAGGGCAAGGCCAAAAATTACCTCTTGTACTTTGCTTAATTTGAGCACTTTACTCAGCT GGGCAAATAAGTGGGGTGCAGGCTTTAAACTCTTCTGATAGTGCAATGGATTATCAATGGCA TAGGACAGCGTCGAGATAAAATTTGGCTTTGTAATCAGCAACGCACACTCCTGAATCAGAAA CTGAGTCTGATGGAAATCTTTGCCACTGCTTTTACCATCGCCACTGAAATCCACATGCGAAA ATAGGCAGCGTAATAAATGCCTGTCTGCCTCAGGACCGTGCCGATTCACAATATGCTGTATT TCCTGCTGGCTGGCTCGGTAATTTTTCTTGGTTAAATTGTCCACCAGGTAGCTGATTTGAGA CAAGGCCAGCGAGAGCGAGTCAAGATTCATTGCTGGTTGGGGCGGAAGCAGGCGGCCGAG GTAATTAGGCTATATCTGGTATCTGTATAATATCTTCAGTTCTTTACCAGGGGTCTTACTC TGTTCTGAAACATGGCACCTCAGGCGGCTCCGGCAGCGCTGGACACAGGAAACTCCTGGGT CCCCGACTCCGGCTCTCCTCGACCCCCTCTTCGGTTAACTCCGCTTGTTTCTCTACAAAATG GCGCCCGCGTACCTCGGCCGCCACCGCGGTGAGCTCCAA >308

ATAGGGAGTCGACCCACGCGTCCGAAAGCACTTGAAAGGAAACAAGACTCCCTTTC ACACATGGATTATTATAAGTTTCAATCCTGGTATCTGTGCTTGATTTTTATCAGTTTTGTGTAG ATTTTTATGTTTCATATTTTAAATTTAAATCCCACATTGTAAAGTTTGTACAATTTGTCCTGAAG CTTTGTGTTTGGCTGCACCTGCATAAGCTGCTACAAATAGAATAAAGAATTTCATAGCCTGTA TCTATCATTTAGATGCATGGAAAAAAATGGGCTTTGCACACAATGGGTTTGGAGCTGACTGG TTCTTTTTCTGTCCTCTTATTTTACCATCTTGTGAAAGGTTTCTGAAACTCGATAATAAAAAG CGGTTGGTGTAAATTATTCTTTTGTGTCACATTTTTAGAAGGAAAAACATAAAAGAATGTATCC TTAGTACTGGTTCTTAAACAGCCCATAAAAACCCATTGGCCTGAAGCTTATATCTCAGGCCTA TGCCCATCTTATAGTCTTGGAAGACAAAAGGCTGGTAGAGACAGTCTTCAGTGGCTTCAGTG ATGCTCTGTAGAGGCCAGGGTGTCTTGAGTGCTGTAACTCCCAAGCACTGGGCTAGCCTGA CTTCTGTATCTCCCTACCACCACCCCCTTAAAAAAATAAGGTAACAGCAAATCTATAGTAAAA CCATGTCTGCATAGAACGTGTTCAAATCCTCTGTTTTCATTAAATGTAAAAGATGCTGTCTCC ATTAAGTTGAATATTTGGAATTGGAGAAGCCATTGATTATTATTTTGAGTTTCTGTAATGTTTT ATAGAAAAGTAAGATGCTTATTCAGAATTTAAGAATGAAGGCAACTGAAATATGCATTGTTGT AAATTGATGAAACGGATGTTGTGTTTCTCTTTCCATCATCTGGTTTTTACCATTTCACTCAGTA GGTATTTTTAGAACACACTTATTTGAGGAAAGAGACATCAGATGCACAATTTTACATTTATAAA GGAACAAATGGGGAAAACTGAAAACTAAAAATTTTAAATGTATTAAATGCCATCCCTGAGCCT 

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NNCAAGCATTGTTGTGGTCGGTCTGTCCCCTCCCCCTCGTGTTATCTCTATTCCGGG CCCTCTCAACCCATGTTTTAAACGGACCACCGTTGGGGTTTTTGCCCCGCGCGAGGGGGAA CATGTAACAAGGGGAATTCCCAATCCTCCGGAAGTTTCCGCAGGACCTTGTTGTCTGTTCCC AAGACGTTCAAATGGCGCTGTGGACCTTTAGGGAGAACCTAAAGGCTCAACTCGTTTCTTAT CTGTTCTGTTCTGCTAAATTCTTTTCTAAGATATCAATGGTTTCTTCCCTAATCTTCCCTTTC CTTTTGTAAGTTTTAATCTTTTCTTCTTGTACTTTTGTTTTTTGATCCAAATTTGCTAGCTTATG ATACTTTTTCATTTTGTTCCTTGAGTGACTCATTCAACTTTTTCACTGTCTCAATTTGTTTATT CAGAGAATCACATGTGATCTGTAAATCTTTATTCTTCTTTTCAGTACTTTCATTTCTCTGAAGA AGTTCCATGTAGGATTTTGTCAGTATTTCATGTTCTTCAGCCACAGACTCTAACTTCCTATTAT GTTGAAAGAGATGCTCAATATCACTCTGCGCTCTTTCTGATTCAACTTGCTGCGCCTTCAGCA ACACACTAAGCTCTTCATTTTTTCTCTCAACTTCTCTCAACATACTAGCCAAGTGTCCGTGCC TCTGTTTCAGCTTGAGTTCTTTGACAGCGATGCTGAGCAATCAGTCTATCAGCCTGTGCAAG TTTCATTTCATATACATCCATTATGTCAGATATTCTCACATCACAAATCTGATCCTTAACCACC ATTCCAGACTGAAGTTTCTCTATTAATTCTTCAATATTCAATCCAGGAACACCATCTTTCAAAT GAGGAGTTAAACACTTTATTGATGTTGGAAAACTGTGATTTGATGATTGCCAGGGCATTTTTC TGGGTATATGTTCTGTTTCCTGTTGTCTATAGGCATTGTTTGCTGCTATACTTTCTCCAAGTAC TAAAGCAGGAAAATCTGGCAGTGGAGCAGCCTCCCAATAATATTCCTCAGTCCAGACTGTAC TTGTTCTCTATTATCTGACGTTAAAGCAAAAGCCAAAGGAGTAATCAAACGTGGGTCCTGAA GTATTTTGTAGAAGCTTACTTCCATACCAGGAACCAATGGTTTAAGTTTGTTAATCAAATCAA GAGTTTTCAAAATTACATCAGCAGCAAGTTTGCATAATTCAGAATCTGCAACCTTTGTTCCAA ATCCCAGGTCAATCTTGCCATATGTAAATTGTTGTTCTATAAGAGTGGTACACTTGACAGTTG TCAAGATTTTTGCAATATGCATTTTTAGTGTATCATCTCCACAGAGAGTTAACAAAACTTCAAT GGCCTTGGCAATCCTTTCACATTTTTTTCTTGTTAAAGCCTCATCTAGATTTTGTTCTGTGAAC TGAAGTTGATCAAGGATTGTAGGCAGCAGAAGGGTCACAAAACGATCAGCCGAGGAACAGT TAGCAGCATCTATGACATCCTCAAATATTTCCTTGAACAACTCCAATGCTAAAACAGAACAGT TTTCTGATCCGTCCAAAGGTTGGCTTAACCAGCGCAGTAGAGCCACAGTAGGTTCTAAACAT TTAGTATGGCTTCCCAGAGTGGCGCTGCCAGGTGGAGACTGTTCAAACATCATCTGAGTGA GCATATGGCGCAGCTGAGTCACTGAACAGAAGGCAAGAAGTAATTCTAAAACCTTTGAAGAG GAATCAGGATCCTTTCCATTAAGAAGACCTAATACTTGGTGAAGACATGAAGAAAAGTGCTC ATATCTGGTGAGATAATCAGCAATTTTAGGATTCTTAAGGAGATCCATCAGTAGGTCAACTGA ATACTITCTAGTTAGAGTGCCATCACCGTTTATGAGAATATTAAATATTAGTTGAAAAGTCTGA TGAATGTTTCGAGCATGGAATAGCTTTTCCCCCACCTCTTCATTTAATGTCAAACTGGATAAT ATTGAAAGTGCAAACACAACCACAGTTAAACTACTATGGGCCAACAAGGTGATAAGAGTTCG ATAAAAAGATTTCACATTACTCAATGTCTTTATGTGCGTTTGAACAGAAAGATTGTGCCGACA **AAGATTTGCCAATAATCCTAGACAAGGCATTTTTAACTCATCTTCAGAAGATTGAATGTGATC** TATCAGGAACGTAATTAATTCATCTATATTGGCACCAGAATAGAAAATTTTGACATTATATGTT **AACTTCTGTAGAAGTTGAATGCACCTGCAAAAACACCGAATCAGTGTGGCTGCTCCGACAAA** CCACTCCCGCCAGCACACTATTCAGATTATATGTATTCTGAAGACAATCTCTGGTTTCCATGT CTACTGCTAGTTGAGACAGCAAACCGATAATACTTAAGATCAGTGAAGCACTTATGTTGGGG TCTTCAAGTAGCTCTACAAGGCAACTCAAGCATTCACTTGTTAATATCTGATTTGATGTAAATA GTCGTGTGAGTTTCTGTCCAGAAATTACCTCCAGAGTGCCGCAAAAGCTGAGTGGCGTTCG TGGAGTCCATTGCACCGGCCGGCCCGGCCTTAGGGACCACCACCGCCCAGCGTGCGCC GGCCTTTAGCTTTCGCC >313

NNNNAGCTTGGCACGAGGCCAGGATTTTTGAAACTTTACATTCTTTACGGTTAAGCA AGATGTACAGCTCAAAGACACTAAATTCTTCTTAGAAAAATAGTGCTAAGGAGTATAGC

#### Table 4

AGATGACCTATATGTGTGTTGGCTGGGAGAATATCATCTTAAAGTGAGAGTGATGTTGTGGA GACAGTTGAAATGTCAATGCTAGAGCCTCTGTGGTGTGAATGGGCACGTTAGGTTGTTGCAT AATAAAATATAGAGAAAAGAAAAATAGAGCAGTTTGAGTTCTATGAGGTATGCAGGCCCAGA GCTGGGGGCAATTGTTTAAAGTCATTTTGTTCCCGACTAGCTGCCTTGCACATTATCTTCATT TTCCTGGAATTTGATACAGAGAGCAATTTATAGCCAATTGATAGCTTATGCTGTTTCAATGTA AATTCGTGGTAAATAACTTAGGAACTGCCTCTTCTTTTTCTTTGAAAACCTACTTATAACTGTT GCTAATAAGAATGTGTATTGTTCAGGACAACTTGTCTCCATACAGTTGGGTTGTAACCCTCAT GCTTGGCCCAAATAAACTCTCTACTTATATCAGTTTTTCCTACACTTCTTCCTTTTAGGTAAAC AATACCAAGAGGGGTTACTGTGCTGGGTAATGTGTAAACTTGTGTCTTGTTTAGAAAGATAAA CAAATTGATAGGGGGGCCAAGTAAGCCCCATATGCTTAATGATCAGCTGATGAATAATCATC TCCTAGCAACATAACTCAATCTAATGCTAAGGTACCCACAAGATGGCAAGGCTGATCAAAGT CGTCATGGAATCCTGCAACCAAAAGCCATGGGAATTTGGAAGCCCTCAAATCCCATTCCTAA TCTGATGAGTCTATGGACCAATTTGTGGAGGACAGTAGATTAAATAGATCTGATTTTTGCCAT CAATGTAAGGAGGATAAAAACTTGCATACCAATTGTACACCCTTGCAAAATCTTTCTCTGATG TTGGAGAAAATGGGCCAGTGAGATCATGGATATAGAAGTACAGTCAATGTTCAGCTGTACCC TCCCACAATCCCACTTCCTTCCTCAACACAATTCAAACAAATAGACTCAGACTGTTTCAGGCT CCAGGACAGGAAGTGCAGTGTAGGCAAAATTGCAAAAATTGAGGGCACAGGGGTGGAGGT GGGGGGTTGAATAACAAGCTGTGCTAAATAATTACGTGTAAATATTTTTTCATTTTTAAAA NNNNNNNNNNNNNNNNNNNN >314

NNNNAGCTTGGCACGAGGCCAGGATTTTTGAAACTTTACATTCTTTACGGTTAAGCA AGATGTACAGCTCAGTCAAAGACACTAAATTCTTCTTAGAAAAATAGTGCTAAGGAGTATAGC AGATGACCTATATGTGTGTTGGCTGGGAGAATATCATCTTAAAGTGAGAGTGATGTTGTGGA GACAGTTGAAATGTCAATGCTAGAGCCTCTGTGGTGAATGGGCACGTTAGGTTGTTGCAT **AATAAAATATAGAGAAAAAGAAAAATAGAGCAGTTTGAGTTCTATGAGGTATGCAGGCCCAGA** GAGACATAAGTATGTTCCTTTAGTCTTGCTTCCTGTGTGCCACACCACCACCACCATA GCTGGGGGCAATTGTTTAAAGTCATTTTGTTCCCGACTAGCTGCCTTGCACATTATCTTCATT TTCCTGGAATTTGATACAGAGAGCAATTTATAGCCAATTGATAGCTTATGCTGTTTCAATGTA AATTCGTGGTAAATAACTTAGGAACTGCCTCTTCTTTTCTTTGAAAACCTACTTATAACTGTT GCTAATAAGAATGTGTATTGTTCAGGACAACTTGTCTCCATACAGTTGGGTTGTAACCCTCAT GCTTGGCCCAAATAAACTCTCTACTTATATCAGTTTTTCCTACACTTCTTCCTTTTAGGTAAAC AATACCAAGAGGGGTTACTGTGCTGGGTAATGTGTAAACTTGTGTCTTGTTTAGAAAGATAAA CAAATTGATAGGGGGGCCAAGTAAGCCCCATATGCTTAATGATCAGCTGATGAATAATCATC TCCTAGCAACATAACTCAATCTAATGCTAAGGTACCCACAAGATGGCAAGGCTGATCAAAGT CGTCATGGAATCCTGCAACCAAAAGCCATGGGAATTTGGAAGCCCTCAAATCCCATTCCTAA TCTGATGAGTCTATGGACCAATTTGTGGAGGACAGTAGATTAAATAGATCTGATTTTTGCCAT

cgtccgcacataTTTGTGGAGTGCCTATTACGTGCCAGAAGCTGTTCTGGACACTGAGAA ACAGGGATGAAGAAGAACAGATCCAAGCCTTCCTGAGAGTAACCTCCCCAGGTTTCATGG ATGAGGAAACTGAAGGTCGTCCTGACTCAGGCTCATGGCTCCGACCCCGGCTTCTGTGGTT GGCTGCGCGCCCCCGGGCCTCTCCAGTGCCCCGCCTGGCTCGGCATCCACCCCCAG CCCGACTCACACGTGGGTTCCCGCACGTCCGCCGGCCCCCCCGCTGACGTCAGCATAGC TGTTCCACTTAAGGCCCCTCCCGCGCCCAGCTCAGAGTGCTGCAGCCGCTGCCGCCGATTC CGGGATCTCATTGCCACGCCCCCGACGACGCCCCGACGTGCATTCCCGATTCCTTTTGG TTCCAAGTCCAATATGGCAACTCTAAAGGATCAGCTGATTTATAATCTTCTAAAGGAAGAACA GACCCCCAGAATAAGATTACAGTTGTTGGGGTTGGTGCTGTTGGCATGGCCTGTGCCATC AGTATCTTAATGAAGGACTTGGCAGATGAACTTGCTCTTGTTGATGTCATCGAAGACAAATTG AAGGGAGAGATGATGGATCTCCAACATGGCAGCCTTTTCCTTAGAACACCCAAAGATTGTCTC TGGCAAAGACTATAATGTAACTGCAAACTCCAAGCTGGTCATTATCACGGCTGGGGCACGTC AGCAAGAGGGAGAAAGCCGTCTTAATTTGGTCCAGCGTAACGTGAACATCTTTAAATTCATC ATTCCTAATGTTGTAAAATACAGCCCGAACTGCAAGTTGCTTATTGTTTCAAATCCAGTGGAT **ATCTTGACCTACGTGGCTTGGAAGATAAGTGGTTTTTCCCAAAAACCGTGTTATTGGAAGTGG** TTGCAATCTGGATTCAGCCCGATTCCGTTACCTGATGGGGGAAAGGCTGGGAGTTCACCCA TTAAGCTGTCATGGGTGGGTCCTTGGGGAACATGGAGATTCCAGTGTGCCTGTATGGAGTG GAATGAATGTTGCTGGTGTCTCTCTGAAGACTCTGCACCCAGATTTAGGGACTGATAAAGAT AAGGAACAGTGGAAAGAGGTTCACAAGCAGGTGGTTGAGAGTGCTTATGAGGTGATCAAAC TCAAAGGCTACACATCCTGGGCTATTGGACTCTCTGTAGCAGATTTGGCAGAGAGATATAATG AAGAATCTTAGGCGGGTGCACCCAGTTTCCACCATGATTAAGGGTCTTTACGGAATAAAGGA TGATGTCTTCCTTAGTGTTCCTTGCATTTTGGGACAGAATGGAATCTCAGACCTTGTGAAGGT GACTCTGACTTCTGAGGAAGAGGCCCGTTTGAAGAAGAGTGCAGATACACTTTGGGGGATC CAAAAGGAGCTGCAATTTTAAAGTCTTCTGATGTCATATCATTTCACTGTCTAGGCTACAACA GGATTCTAGGTGGAGGTTGTGCATGTTGTCCTTTTTATCTGATCTGTGATTAAAGCAGTAATA TTTTAAGATGGACTGGGAAAAACATCAACTCCTGAAGTTAGAAATAAGAATGGTTTGTAAAAT CCACAGCTATATCCTGATGCTGGATGGTATTAATCTTGTGTAGTCTTCAACTGGTTAGTGTGA GCCAGGTGGATGTTTACCGTGTGTTATATAACTTCCTGGCTCCTTCACTGAACATGCCTAGT CCAACATTTTTCCCAGTGAGTCACATCCTGGGATCCAGTGTATAAATCCAATATCATGTCTT GTGCATAATTCTTCCAAAGGATCTTATTTTGTGAACTATATCAGTAGTGTACATTACCATATAA TGTAAAAAGATCTACATACAAACAATGCAACCAACTATCCAAGTGTTATACCAACTAAAACCC gttaaacaatgggggggggcgcgcagtgaagaacgggcaagggccagagagacgggccgcaagggggtttccccaaaaaaccgg gccggtccgaaacagggtcgggtcgggaac >317

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# Table 4

GTTGAAAGAGATGCTCAATATCACTCTGCGCTCTTTCTGATTCAACTTGCTGCGCCTTCAGCA ACACACTAAGCTCTTCATTTTTCTCTCAACTTCTCTCAACATACTAGCCAAGTGTCCGTGCC TCTGTTTCAGCTTGAGTTCTTTGACAGCGATGCTGAGCAATCAGTCTATCAGCCTGTGCAAG TTTCATTTCATATACATCCATTATGTCAGATATTCTCACATCACAAATCTGATCCTTAACCACC ATTCCAGACTGAAGTTTCTCTATTAATTCTTCAATATTCAATCCAGGAACACCATCTTTCAAAT GAGGAGTTAAACACTTTATTGATGTTGGAAAACTGTGATTTGATGATTGCCAGGGCATTTTTC TGGGTATATGTTCTGTTTCCTGTTGTCTATAGGCATTGTTTGCTGCTATACTTTCTCCAAGTAC TAAAGCAGGAAAATCTGGCAGTGGAGCAGCCTCCCAATAATATTCCTCAGTCCAGACTGTAC TTGTTCTCTATTATCTGACGTTAAAGCAAAAGCCAAAGGAGTAATCAAACGTGGGTCCTGAA GTATTTTGTAGAAGCTTACTTCCATACCAGGAACCAATGGTTTAAGTTTGTTAATCAAATCAA GAGTTTTCAAAATTACATCAGCAGCAAGTTTGCATAATTCAGAATCTGCAACCTTTGTTCCAA ATCCCAGGTCAATCTTGCCATATGTAAATTGTTGTTCTATAAGAGTGGTACACTTGACAGTTG TCAAGATTTTTGCAATATGCATTTTTAGTGTATCATCTCCACAGAGAGTTAACAAAACTTCAAT GGCCTTGGCAATCCTTTCACATTTTTTTCTTGTTAAAGCCTCATCTAGATTTTGTTCTGTAAAC TGAAGTTGATCAAGGATTGTAGGCAGCAGAAGGGTCACAAAACGATCAGCCGAGGAACAGT TAGCAGCATCTATGACATCCTCAAATATTTCCTTGAACAACTCCAATGCTAAAACAGAACAGT TTTCTGATCCGTCCAAAGGTTGGCTTAACCAGCGCAGTAGAGCCACAGTAGGTTCTAAACAT TTAGTATGGCTTCCCAGAGTGGCGCTGCCAGGTGGAGACTGTTCAAACATCATCTGAGTGA GCATATGGCGCAGCTGAGTCACTGAACAGAAGGCAAGAAGTAATTCTAAAACCTTTGAAGAG GAATCAGGATCCTTTCCATTAAGAAGACCTAATACTTGGTGAAGACATGAAGAAAAGTGCTC **ATATCTGGTGAGATAATCAGCAATTTTAGGATTCTTAAGGAGATCCATCAGTAGGTCAACTGA** ATACTTTCTAGTTAGAGTGCCATCACCGTTTATGAGAATATTAAATATTAGTTGAAAAGTCTGA TGAATGTTTCGAGCATGGAATAGCTTTTCCCCCACCTCTTCATTTAATGTCAAACTGGATAAT ATTGAAAGTGCAAACACAACCACAGTTAAACTACTATGGGCCAACAAGGTGATAAGAGTTCG ATAAAAAGATTTCACATTACTCAATGTCTTTATGTGCGTTTGAACAGAAAGATTGTGCCGACA AAGATTTGCCAATAATCCTAGACAAGGCATTTTTAACTCATCTTCAGAAGATTGAATGTGATC TATCAGGAACGTAATTAATTCATCTATATTGGCACCAGAATAGAAAATTTTGACATTATATGTT AACTTCTGTAGAAGTTGAATGCACCTGCAAAAACACCGAATCAGTGTGGCTGCTCCGACAAA CCACTCCGCCAGCACACTATTCAGATTATATGTATTCTGAAGACAATCTCTGGTTTCCATGT CTACTGCTAGTTGAGACAGCAAACCGATAATACTTAAGATCAGTGAAGCACTTATGTTGGGG TCTTCAAGTAGCTCTACAAGGCAACTCAAGCATTCACTTGTTAATATCTGATTTGATGTAAATA **GTCGTGTGAGTTTCTGTCCAGAAATTACCTCCAGAGTGCCGCAAAAGCTGAGTGGCGTTCG** TGGAGTCCATTGCACCGGCCGGCCCGGCTTAGGGACCACCACCGCCCAGCGTGCGCC **GGCCTTTAGCTTTCGCC** 

GCCGCCGGGCAGGTACAAGGTTTGGTGATGTAGGCGATTTTTTTACCACATTCGA **ACAGTGATGGTCAGTCACTTTCTGTAGAGTATCTGTGTGCATATTAACGCTCTAATTATATTTT AAAATCTTATTTTATATAGGATGTAATTGGAAAATCGATGAATCAAGCAATCTGTATTCCATTG** TATAGAGATACCAGAAGTGAGGATTCTACACGTAGATTGTTCAAATTTCCTTTTCTGTGGAAT **AATAAAACTTCAAATCTACATTATCTTCTTTTTACTATTCTAGAAGATCCACTTTATAAAATGTG** CATCTTAAGGAGACATACTGATATTTCTCAATCTGTGAGTAATGGACTAATTGCTATTAAATTT GGGAGCTTTACATATGCCACAACAGAAAAAGTCAGAAGAAGCATCTACAGTTGTTTAGATGC ACAGTTTTATGATGATGAAACTGTAACAGTAGTTCTTAAAGACACTGTAGGACGTGAAGGAA GAGATAGACTCTTGGTCCAGCTGCCTTTGTCTTTAGTATATAACAGTGAAGATTCTGCAGAAT ATCAGTTCACTGGGACTTATTCTACAAGGCTAGATGAACAGTGTAGTGCTATTCCCACCCGT **ACCACTGCTCATCACTGAATGACTTTATACATGCATAATAATGACCACCAGCAGCGCTCCCA** GAATGAACCATAACAGAGAAAAGTTCATAGATCAAGGAATTCTTTTCAAGTCCAGATTTTGAG **ATCTTTTCAGTTCCACTATTGGTTTCAAGACAGATTCCTTCATCAACACCATCATCATTGGAG AAATCGTTGCTCATCTGATCACTGTGACAACTACCTTCATTTTCTGCTCCACTGTCAGTGCAA** CTTTCAGTCTGAGGAGATTTCTCATCTTCAACATCAATAAAAGTACCTCGGCCGCCACCGCG **GGGAGCTCCAA** 

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NNCTCTGAAGATGATACCAAAATTCCTTTTGATAATTTTTTAAGTTTCCAGCTCTTCAC CGAAATGTTGTATTCAGTGTTTCCTTCCAGACATTTTTAAGGTAATTGGCTTACTAC ACTCATATAAGCATATTTGATGGAAAGGTTGTCCACACTGAGAATTATCACACACTTGATCAG GAATGGTACCGTCAAGTTGATAAGCATAACAAATTCCACAATCCATAGTAAAATCAGATTTTT CCAGGATAGCACGAGCTGGAAAATCAATTTCTAAAACATCTTTCAAATTTTGTAACACACTAT TTTCTGGATCCCTGAAAGCATGGGGAAAAAAATTATGCTGTGAACTTTGTAAAATCACCAAAA GGGGTTTTACCACTTCAGATTAAAAAAAAAAATTTAATAATTGCATGCTCTACTCTTGGTTTC TAAAGCCACATTTGATACAGAATGTTTCTTAACTACTTGATTAGAAAAATCAAAATTATATGTAT TATGTTAAAAAACAAAATTATACAGTTCAGAATGCTGAGACATTGTCATTTAAAATAACTATCA TTATTGCGGTGAACCGAGATCGCGCCATTACACTACATACTGGGCAACAAGAGCAAAACTCC GTCTCAGACAAAAATAAAAACTACCATTAATATACTAATATTGTCTAATAATTTAACAATGCT AGGGCAAGGATTTTATGACTCTATTAAAAAACGTTTAAATCTCAGATGTCATACCATGGTCAG CTCCAAGAAAGAAGCACTCAGGAAGCATAGTAGGATGCCTGGGGTCTACCTCTATATTTATG GCAACATTATTACCTAATGCAATTCTGCGTGCATGTTGCACCCCGGGGAGGTTTTTCTGGCT CAAGTACCCAGGTCTTCTCATCGATTTCATCCATAACATCCCAGAATGCCTTTAGTGATTCTA TTGCTGCCAAAAACTGACTATAAATGCTTATTAAGGAGCTCTGAGGAGAATTTACCTGAGGT GTCCAGGAGGCACAAAATGGAACAGGAAAATCCACAAAATAATCTGGTGATTCTGCAGGATA CTTTGCCTTCAACTTGAGAGTGATTAAATGCTCTCTACCAGAAGCATCTTCTGCTTTTAACTT CAATAAGGCTTGAGTAGAACTGGGGAGTGATTCAAAACTTTTAAATTTGACAACTGCTTCTCT CAGCCAAAATACAAACAGCTATTATTGGTGAAGTTAGCCGGACGCGTGGTGANN >326

TTGGAGCTCCACGCGGTGGCGGCCGAACGTTGGCTTATCATAATATTGCTGACAGC AATAAACTGCCACATCTTCAGCCTGCAGGCTGCTGGTGGTGAGAGTGAAATCTGTCCCAGA

### Table 4

CCCGCTGCCACTGAATCGGTCAGGGACCCCGGATTCCCGGGTAGACGCCCAGTAAATGAGCAGTTTAGGAGGCTGGCCCGGTTTGTGCTGGTACGCGGGAGAATGGCTCGCAAGCTGACTGTGAGCTCGGAAATCCTTTTAAAAGAAATTCAAATGTCACTTTTTATTTGGTTTTAAGTACCTCGGCCGCCACCGCGGTGAGCNNN >328

TGTCACAGACACTCCTGGGTTTGGAATTTTGTTGTTCTCTGTCTCTTTGATTTCCTGG
AAGACGACACCATGACAATTTCAAAGAAAATAGAACAAAATGAAGGAAAAAAGAGGCTCTGTC
TTAGCACATTCCTGTGACCAGCCTGCTGTCTGTGGCGTGCCCTCCTGGCCCGGCCTTGGCA
CATGTTCGTTTTTGTGGTTGTTGCCTGGACAGGCAACTCTGCAGGGCTGCTTCTCTACGCAT
CCCTTTGCCTGCCTGCCTGTGCCAGGGGTTGTCAAGGGCTTTTTGGGTCAGAGTGGCCACC
CTTTCTCCAAGGCTCCCTGCAACAGCTGGCCTGTCCCTGGTGGGGCTGACAGCTTTCTTCTT
ACCCTGCCAGGCTGGCCAAGCCCCAGAGGTGACCTATGAGGCAGAAGAGGGCTCCTTGTG
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TGGCTGCTAACCAACATCCCGGGTAACCGGGTGGCTGAAGGACAGGTGACGTGTCCCTACC
TCCCCCCTTCCCTGCCCGAGGCTCCGGCATCCACCGTCTTGCCTTCCTGCTCTTCAAGCA
GGACCAGCCGATTGACTTCTCTGAGGACGCCCCCTCACCCTGCTATCAGCTGGCCCAG
CGGACCTTCCGCACTTTTGATTTCTACAAGAAACACAAGAAACCATGACTCCAGCCGGCTTG
TCCTTCTTCCAGTGCCGCTGGGATGACTCCGTCACCTACATCTTCCACCAGCTTCTGGACAT
GCGGGAGCCGGTGN

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TCCGAAATGGGGGAAAATCACTGCTCTTCCCAGAGCGCATACATGTTTTAACCGTCT GGATCTGCCTCCCTACCCATCCTTTTCCATGCTTTATGAAAAACTGTTGACAGCAGTTGAAGA AACCAGTACTTTTGGACTTGAGTGACCTGGAAGCTGAATGCCCATCTCTGTGGACAGGCAGT TTCAGAAGCTGCCTTCTAGAAGAATGATTGAACATTGGAAGTTTCAAGAGGATGCTTCCTTTA **GGATAAAGCTACGTGCTGTTGTTTTCCAGGAACAAGTGCTCTGTCACATTTGGGGACTGGAG** ATGAGTCCTCTTGGAAGGATTTGGGTGAGCTTGATGCCCAGGGAACAACCCAACCGTCTTTC AATCAACAGTTCTTGACTGCCAAACTTTTTCCATTTGTTATGTTCCAAGACAAAGATGAACCC ATACATGATCAGCTCCACGGTAATTTTTAGGGACTCAGGAGAATCTTGAAACTTACCCTTGAA CGTGGTTCAAGCCAAACTGGCAGCATTTGGCCCAATCTCCAAATTAGAGCAAGTTAAATAAG ATAATAAAAGTAAATATATTTCCTGAAAGTACATTCATGTAAGCCCTAAGTTATAACAGAATAT TCATTTCTTGCTTATGAGTGCCTGCATGGTGTGCACCATAGGTTTCCGCTTTCATGGGACAT GAGTGAAAATGAAACCAAGTCAATATGAGGTACCTTTACAGATTTGCAATAAGATGGTCTGTG ACAATGTATATGCAAGTGGTATGTGTGTAATTATGGCTAAAGACAAACCATTATTCAGTGAAT TACTAATGACAGATTTTATGCTTTATAATGCATGAAAACAATTTTAAAATAACTAGCAATTAATC ACAGCATATCAGGAAAAAGTACACAGTGAGTTCTGTTTATTTTTTTGTAGGTTCATTATGTTTAT GTTCCATGCATACTCGGGCATCATGCTAATATGTATCCTTTTAAGCACTCTCAAGGAAACAAA AGGGCCTTTTATTTTTATAAAGGTAAAAAAAATTCCCCAAATATTTTGCACTGAATGTACCAAA GGTGAAGGGACATTACAATATGACTAACAGCAACTCCATCACTTGAGAAGTATAATAGAAAAT **AGCTTCTAAATCAAACTTCCTTCACAGTGCCGTGTCTACCACTACAAGGACTGTGCATCTAAG** TCTCTTCCATCCATCAAATACTTTACAGGATGGCATTTAATACAGATATTTCGTATTTCCCCCA CTGCTTTTTATTTGTACAGCATCATTAAACACTAAGCTCAGTTAAGGAGCCATCAGCAACACT GAAGAGATCAGTAGTAAGAATTCCATTTTCCCTCATCAGTGAAGACACCACAAATTGAAACTC AGAACTATATTTCTAAGCCTGCATTTTCACTGATGCATAATTTTCTTATTAATATTAAGAGACA GTTTTTCTATGGCATCTCCAAAACTGCATGACATCACTAGTCTTACTTCTGCTTAATTTTATGA GAAGGTATTCTTCATTTTAATTGCTTTTTGGGATTACTCCACATCTTTGTTTATTTCTTGACTAAT CAGATTTTCAATAGAGTGAAGTTAAATTGGGGGTCATAAAAGCATTGGATTGACATATGGTTT GCCAGCCTATGGGTTTACAGGCATTGCCCAAACATTTCTTTGAGATCTATATTTATAAGCAGC CATGGAATTCCTATTATGGGATGTTGGCAATCTTACATTTTATAGAGGTCATATGCATAGTTTT CATAGGTGTTTTGTAAGAACTGATTGCTCTCCTGTGAGTTAAGCTATGTTTACTACTGGGACC CTCAAGAGGAATACCACTTATGTTACACTCCTGCACTAAAGGCACGTACTGCAGTGTGAAGA AATGTTCTGAAAAAGGGTTATAGAAATCTGGAAATAAGAAAGGAAGAGCTCTCTGTATTCTAT **AATTGGAAGAGAAAAAAGAAAAACTTTTAACTGGAAATGTTAGTTTGTACTTATTGATCATGA** NNNNNNNNNN

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GGGCTTACAGTGGCGGGAGTTGGAGGCGATAACGATTTGTGTTGTGAGAGGCGCA AGCTGCGATTTCTGCTGAACTTGGAGGCATTTCTACGACTTTTCTCCAGCTGAGGCTTTTCC TCCGACCCTGATGCTCTTCAATTCGGTGCTCCGCCAGCCCCAGCTTGGCGTCCTGAGAAAT GGATGGTCTTCACAATACCCTCTCAATCCCTTCTGACTGGTTATCAGTGCAGTGGTAATGAT GAACACACTTCTTATGGAGAAACAGGAGTCCCAGTTCCTCTTTTGGATGTACCTTCTCTT GCTCCCAATATGGAACATGTACTAGCAGTTGCCAATGAAGAAGGCTTTGTTCGATTGTATAA TCTTTGACCTGGCCTGGGTTCCTGGTGAACTTAAACTTGTTACAGCAGCAGGTGATCAAACA GCCAAATTTTGGGACGTAAAAGCTGGTGAGCTGATTGGAACATGCAAAGGTCATCAATGCAG CCTCAAGTCAGTTGCCTTTTCTAAGTTTGAGAAAGCTGTATTCTGTACGGGTGGAAGAGATG GCAACATTATGGTCTGGGATACCAGGTGCAACAAAAAAGATGGGTTTTATAGGCAAGTGAAT CAAATCAGTGGAGCTCACAATACCTCAGACAAGCAAACCCCTTCAAAACCCAAGAAGAAACA GAATTCAAAAGGACTTGCTCCTTCTGTGGATTTCCAGCAAAGTGTTACTGTGGTCCTCTTTCA AGACGAGAATACCTTAGTCTCAGCAGGAGCTGTGGATGGGATAATCAAAGTATGGGATTTAC GTAAGAATTATACTGCTTATCGACAAGAACCCATAGCATCCAAGTCTTTCCTGTACCCAGGTA GCAGCACTCGAAAACTTGGATATTCAAGTCTGATTTTGGATTCCACTGGCTCTACTTTATTTG CTAATTGCACAGACGATAACATCTACATGTTTAATATGACTGGGTTGAAGACTTCTCCAGTGG CTATTTCAATGGACACCAGAACTCTACCTTTTATGTAAAATCCAGCCTTAGTCCAGATGACC **AGTTTTTAGTCAGTGGCTCAAGTGATGAAGCTGCCTACATATGGAAGGTCTCCACACCCTGG** CAACCTCCTACTGTGCTCCTGGGTCATTCTCAAGAGGTCACGTCTGTGTGCTGGTGTCCATC TGACTTCACAAAGATTGCTACCTGTTCTGATGACAATACACTAAAAATCTGGCGCTTGAATAG AGGCTTAGAGGAGAAACCAGGAGGTGATAAACTTTCCACGGTGGGTTGGGCCTCTCAGAAG AAAAAAGAGTCAAGACCTGGCCTAGTAACAGTAACGAGTAGCCAGAGTACTCCTGCCAAAG CCCCCAGGGTAAAGTGCAATCCATCCAATTCTTCCCCGTCATCCGCAGCTTGTGCCCCAAG CTGTGCTGGAGACCTCCCTCTTCCTTCAAATACTCCTACGTTCTCTATTAAAACCTCTCCTGC CAAGGCCCGGTCTCCCATCAACAGAAGAGGCTCTGTCTCCCCGTCTCTCCCAAGCCACCT TCATCTTTCAAGATGTCGATTAGAAACTGGGTGACCCGAACACCTTCCTCATCACCACCCAT CACTCCACCTGCTTCGGAGACCAAGATCATGTCTCCGAGAAAAGCCCTTATTCCTGTGAGCC AGAAGTCATCCCAAGCAGAGGCTTGCTCTGAGTCTAGAAATAGAGTAAAGAGGAGGCTAGA CTCAAGCTGTCTGGAGAGTGTGAAACAAAAGTGTGTGAAGAGTTGTAACTGTGTGACTGAGC TTGATGGCCAAGTTGAAAATCTTCATTTGGATCTGTGCTGCCTTGCTGGTAACCAGGAAGAC CTTAGTAAGGACTCTCTAGGTCCTACCAAATCAAGCAAAATTGAAGGAGCTGGTACCAGTAT CTCAGAGCCTCCGTCTCCTATCAGTCCGTATGCTTCAGAAAGCTGTGGAACGCTACCTCTTC CTTTGAGACCTTGTGGAGAAGGGTCTGAAATGGTAGGCAAAGAGAATAGTTCCCCAGAGAAT AAAAACTGGTTGTTGGCCATGGCAGCCAAACGGAAGGCTGAGAATCCATCTCCACGAAGTC CGTCATCCCAGACACCCAATTCCAGGAGACAGAGCGGAAAGACATTGCCAAGCCCGGTCAC CATCACGCCCAGCTCCATGAGGAAAATCTGCACATACTTCCATAGAAAGTCCCAGGAGGACT TCCACTAAAACAAGCTGAGCTTTGGTCCACTAAAACAAGATGAAAAATACAAGAGTGACTCTA TAACTCTGGTCTTTAAGAAAGCTGCCTTTTCATTTTTAGACAAAATCTTTTCAACGCTGAAATG TACCTAATCTGGTTCTACTACCATAATGTATATGCAGCTTCCCGAGGATGAATGCTGTGTTTA CATCTTCTCTATAATAATGACATCCCAGTTCATGGAGGCAAAAAAACAAGTTTCTTGTTATCCT GAAACTTTCTATGCTCAGTGGAAAGTATCTGCCAGCCACAGCATGAGGCCTGTGAAGGCTG TGCTCAGATAAGTACATTTATATCAGTTCAGTGTTAAAATGCAGTCTCTTGAGTTAAAGTCATC GCTGTGTTTTTTTCTCTCAAATATATCTCCCGTATGAGATTTCAGGTCCCCATGTTTTC ACCAAGCAATCTGCTATGTCAGCCAACCCAACATCACTTTCTACAGGAGGTTATGATTTTTGC CATTTACTAGAGGAAGATGTTTTATGAAATCAATTTGGGGTTTGAATTCAGGTGCAGTCATCA GTTCTTTAGGGGCTGCAATGTTTTAAAAAAAAATAAGTCATCAGATTTTAAGAAAAAAGTGATG ATTTCTTATTGATATTTTTGTAACAGAATATAGCTCTTAACTGAAAATCCAGAACCAGAAACAT 

#### Table 4

ATAATGTGCAAAATATCTTAAACATCCCTCCCCTTATTCAACAATTATGTATCAGTGATCTTGA ACCATTGTTTTATATTTTTCACCTTTGTAACCTCATGGAAAGAGGCTTTACATACTTTCTATGT ACTATTTACTTAGAAGGGAGCCCCCTTCCAGTCATGAAACTTCATTTGTTTTATCCATATCCC TGAGGACTGTGTAGACTTTATGTCAGTTCTGTGTAGACTTTATGTCAGTTTTTGTCATTATTTG AAAATCTATTCTGACAACTTTTTAATTCCTTTGATCTTATAAGTTAAAGCTGTAACAACTGAAAT TGCATGGATCAAGTAAGCATAGTTTTATCCAGGGAGAAAAATAAAAGGAAGCCATAGAATTG CTCTGGTCAAAACCAAGCACACCATAGCCTTAACTGAATATTTAGGAAATCTGCCTAATCTGC GCCAGTAACGCTGTTTATCTCACTTGCTTTGAAAGCCAATGGGGGAAAAAAATCCATGAAAA AAAAAAGATTGATAAAGTAGATGATTTTGTTTGTATCCCTACCCATCTCCTGGCAGCCCTACT GAGTGAAATTGGGATACATTTGGCTGTCAGAAATTATACCGAGTCTACTGGGTATAACATGT CTCACTTGGAAAGCTAGTACTTTTAAATGGGTGCCAAAGGTCAACTGTAATGAGATAATTATC CCTGCCTGTGTCCATGTCAGACTTTGAGCTGATCCTGAATAATAAAGCCTTTTACCTTATCTG ATGTCCTTTTTTGAGCTTTTTGCATTACCTAGAAGCAGTCTACAAAAAAGAACTATAGTAGTCA AGAATCCCTTCTACTTGTTCATTAAAATGTTTATTCCCCAGTTATAATCTATTTCAAGCTGAAA 

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NNNAGTGGCATGGGGTGGGGTCTGACTCCACACACTAGCCACATGGCCAACAGC ATAGTGAAACGGGGTCCCATTCTCCATGTCATTGTGTAATCCAATGGTGGCTCATAGAGATG GAATGCAGAGGGTTGCAAAAGAAATCAGAAGTTTGGTTCCCAGGACAGTTTCCTAGATGAAC TACTTTTCCTCCCAGCCCTCTCTCTCTTTACCGAGGGTGAGCAATACAAAAGGGGTGTGCTG CAGCTCCAGCTTTCAGAGTACCGCCACAGATCCACAGCCTGTCCTGATCTGAGAGCTGAGC CGATGCCTTTCTTCTGGCTGTGTCTTTTTACCTTCTGGACAAGTAGGATGAGGTGAAAGG AGCTGTCCTTCTAAGTCTTTGTATCTCCATTTGTCTGCAGTTTCTCCTCGGTCTCGTGTGTCT GTGTGCCAGTCCCTTGTGCTGACACAGGACGTCCCTTAAAGTCCAGTCCTGGCGATTTCT GAATCTCACTCTTTCCCTCTTTAAAGTTCCAGGATCCTTCTTATCTCCCTTTCCCCCATAGTCT GGCTTAGTCTCTTTGTTTCCGGGCGTAAAAGCACTGGGATTAATATGTTTTCCAGGCTGAGG GATTCAGTCCCAGAAATGTTAGGACTACCTCAGTTTTGCTCCAAACCAAACTCAAACAACAG CAGCCACTGGAAATCAAGGAAACTTCACTAAGAATTTAACAGATCAGCAAAACACCGCCTCC TTCCCATTTTAGCACGTTCAGAGTGGACTCAGTGAGGAGTGAGAAGGCTGTTCTTTGGGGTG GGGTAAAGTTTTTAAACTCCACACATCATCATAAATCACTTTAGAAGAGGATGACTGGTGCCT TAACCCCTTCCAAACCAAGTCATCGGGGTAACTTCTCTTCCAGTATGTTTTTACCGCGTCGAC **TCCNNN** 

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GACCCACGCGTCCGGTTTGTGGAGTCGCGAGTGCTGGTGTCCGGCTGGAGTGCAA
TGGCGTGATCACAGCTCACTGCAACCTCCGCCTCCCGGGTTCAAAATGTTTGATAGGTTTAT
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TCTACACATGTCTGACACTCTCATGTCCCACGGATTACAGAAAGACATTCCTTGCAGGAGAA
CATGGCTTCCCAGTGATGTGGGAAAGATGGACTCTGATCTCCAGGGTAGAAGTGGCAACCA
GAGTAAGCCAGTTCGTTGAAGCAAATGATGGCTGCAGTGAAGAGTACCGAGGCACACCCAT
CCTCAAACAAGGATCCCACACAGGGCCAGAAATCAGCCCTCCAGGGTAACAGCCCTGACTC
CGAGGCCTCCCGTCAGCGCTTCAGGCAGTTTTGCTACCAGGAGGTAACTGGCCCACATGAA
GCTTTTAGCAAACTCTGGGAACTCTGTTGTCAGTGGCTGAGGCCGAAGACCCACTCAAAAGA
GGAAATCCTGGAGCTGCTGTTTTGGAGCCAGTTTCTGCCAGAGGAGATCCAGA

# Table 4

CCTGGGTGAGGGAGCATCCAGAAAACGGCGAGGAAGCTGTGGCTCTGGTTGAGGATG TACAGAGAGCTCCTGGACAACAGGTTCTAGATTCTGAGAAGGACTTGAAAGTACTCATGAAG GAGATGGCCCCTTTGGGAGCAACCAGAGAATCACTGAGATCCCAATGGAAACAGGAGGTTC AGCCAGAGGAACCGACTTTTAAGGGATCACAGAGCTCACACCAAAGACCAGGGGAACAGTC AGAAGCCTGGCTTGCTCCTCAGGCTCCCAGGAACCTGCCTCAAAACACAGGTCTCCACGAC CAGGAGACAGGTGCTGTGGTCTGGACAGCTGGGCCCCAGGGACCAGCCATGCGTGACAAC AGAGCTGTATCCCTCTGTCAGCAAGAATGGATGTGCCCAGGCCCTGCACAAAGGGCCCTCT ACAGGGGTGCCACCCAGAGGAAGGACAGTCACGTCTCGCTGGCAACAGGTGTGCCCTGGG GCTATGAAGAGACCAAGACGCTCCTGGCTATTCTTAGTAGTTCTCAATTTTATGGAAAACTCC AGACCTGTCAGCAGAACAGCCAGATCTACAGGGCCATGGCGGAAGGACTCTGGGAGCAGG GTTTTCTGCGGACCCCAGAACAGTGTCGCACCAAGTTCAAAAGCCTACAGTTGAGTTACCGC GATATTGAGGCTGGAGAGCTGAATCACCAGAATGGGGAACCCACGGAGGTAGAAGATGGCA CTGTGGATGGTGCAGACAGGGATGAAAAGGACTTCAGGAATCCTGGCCAGGAAGTCAGGAA ACTAGACCTGCCAGTGCTGTTCCCAAACAGACTTGGTTTTGAGTTCAAGAACGAGATTAAAA AAGAAAATCTAAACATGGGATGATTCAGAGGAAGTAAGAAATAAACCAAGGCTTTTACAGAG GAAAGTTCCCGAGGAGTCTATTGGCACTCTGAGGCTACCAACAGGCTTGGGAGAGTGAGCC AACATCCAGAAGGGCAATGTAGAAATTCTCCCAGGCAGAGTTGAGGAGAAACCCCATTCCC AGAGAGATGAGTCCCGAAGTTTGGTGCCGGACAAGCCTGTCCAATTTCTCTGGGGGAAAAC TGTCCGATGTGCTCCCCAAGCAGGTCAATGGAAAATTTCAAGTCGGTTGGGAAACTTTCCA **GTCTATTGTCGGNNN** >337

TCGACCCACGCGTCCGGGCCCGCGCTGACGGTGTCCCTGGGGCTCTGCGCTCGTC CGGCCGGCCCGGCCTCGCCGCCGCGCGCTACCCAGCCCGGCCCGCCGACCCGCCT CTACTGCCGGCTCCGCGCCCTTCCCCGAGGGCTGGATGATGGGCTGTTTCGCCCTGCAAA CGGTGGACACCGAGCTGACCGCGGACTCGGTGGAGTGGCCCGCTGCAAGGCTGCAGG CACCTGCTGGCGTGCGGGACCTACCAGCTGCGGCGGCCGGAGGTACGCGGGATAATCAAG GTGTCACATCCCGGTGGCTGGACATGCCCTCTTGGGCTTGGCAGATGCCAGTGGATCCATA CAACTACTCCGCCTGGTGGAATCTGAGAAGAGCCACGTGCTGGAGCCATTGTCCAGCCTTG CCCTGGAGGAGCAGTGTCTGGCTTTGTCCCTAGATTGGTCCACTGGGAAAACTGGAAGGGC CGGGGACCAGCCCTTGAAGATCATCAGCAGTGACTCCACAGGGCAGCTCCACCTCCTGATG GCCTGGATTGCCGCTTTCAATTACTGGCATCCAGAAATTGTGTATTCAGGGGGGCGACGATG GCCTTCTGAGGGGCTGGGACACCAGGGTACCCGGCAAATTTCTCTTCACCAGCAAAGACAC ACCATGGGTGTGCAGCATCCAGAGCAGCCCTCATCGGGAGCACATCCTTGCCCACGGG AAGCTATGATGAACACATTCTACTGTGGGACACACGAAACATGAAGTAGCCGTTGGCAGATA CGCCTGTGCAGGGCGGGGTATGGAGAATCAAGTGGCACTCCTTTTCACCACCAACCTGTTC TGGACGTCTGCATGCACAGN

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#### Table 4

TTATTTATTTTGTGGGTTTTCAGGGTGACTAAGTTTTTCCCTACATTGAAAAGAGAAGTTGCC AAAAGGTGCACAGGAAATCATTTTTTTAAGTGAATATGATAATATGGGTCCGTGCTTAATACA ACTGAGACATATTTGTTCTCTGTTTTTTTAGAGTCACCTCTTAAAGTCCAATCCCACAATGGT GAAAAAAAAAAAAGTATTTGTTCTACCTTTAAGGAGACTGCAGGGATTCTCCTTGAAAAC AACTCAGTGTGCTGAAATTCACCTGACTTTTTTGGAAAAAATAGTCGAAAATGTCAATTTGGT CCATAAAATACATGTTACTATTAAAAGATATTTAAAGACAAATTCTTTTCAGAGCTTCTAAGAT TGGTGTGGGCAGATTTTTAAGAGCCTAGAGTTTAGTCTTAGAGAAAGAGTGAGGAGATAGTA AGGTTAGATAGAGCCACTGAGTTTCAAGAAAAAACATACTACTAAGAATCCCATATGTTATA ATTTAAAGCCTTTACTTTTGGCCTCATGCTGCTAGGTGAAAGAGTGGTTGTTCACAGGACTTG TATTTTCCAAGATGATTAAAGATGGTAAAATACTATCTTTCAATGTTATCAAAAAATGGTAGCA ACTTATACTTCTATTTCAAAGCCATATAAATTTAACAAAATTAAAGTTTGTGGGTGTTTGATAA CCCAATCACTCAATATCCAATTAAAATATGGAATAAGTTTCAAATAAAATATGGAATTACATTT CTCTGCTTCTGATAACTGTGGTCACTAATCAACCCCCATGTTATCCCCGATATGTCTAGGACT TAGCTTAAAAAGATAGCAGATGTATTTGAGATGAGTGGGAACTATACATGGGTATCAGCTTTC TTGGTAAATTTCTGCTTTTTCCATGGCCTTGACCATCTTTGCTACTGCGCAGTGAACCAGGAC TTAATTTCTCACACTGTTTCTGCAGGTTCCGGTACCAAAGAAGATGCAGTTCAAAATACTGCC AGTTTTCCAAGAAATTTTGTAAAGTTGAACATGGCCATCTACTCTTGCCTTAAAACTTTTCTCA CCACACCCACCTTCCCACATGCATGATATCCAAGGTCGACAGACCTGGATTAGAATCCACTC TCAAGCTTCTCATGCAGTGCGTATTGTATTTTCTGCATAAGAAAGGGCTGCCTCTAGAACACA GTAAGTGTATTTGCCCAGTAGTGACATTGCCTACATATAGCCAAGTGTTATAGTATACCAACT TAGTATATTTTCAAGGAGAGCTAAACCACCTTTTGTAATGTTTGGTTTCTCACTGTTATCTTC CTTTCCTATAATTAATTTATTTTAATCTACAAATTGACATAGGGCTAAAAGCTTCAATATTTTAC AAAATATTAATTAATGTAATTGTTCCCAATTATTAGAAACTTTTTTCCATTTTTCAAAATGTTTG TTATTAGCTATTCCAGGCAAGCTAAGTACTAGAATAAACTAGATAAAAACTTGGCTTTAAGCA TGTACTTTGATATTTATAAAACAAAGGTGTTTTTTTTTCATTTCTGCATCTGAATCAATACAAAT TTACACATGAAGAATTTTGGCTGTAAATTTAAAATTTTAGAGATTTTTACTACTGCCCTCACCTC TGCCTCCTTAACTGTTCTCTTCCTTACTCTCCCTCTCTTAACACTTTCTCTCAAATTAATTAT CTTTTAGTTAGTGATGACATTATTTTTCCCAGCTGGTACAGGTAATATTTCTCACAACCAAGC CTTAATCATTTTTAAAAAATACACTCAACTCTAATTCTGGCCTAAATATTATTTTTCTGAAAAAG CTTCTGATTTAAGATTGATTCCAATAGACACTAAGTTGGAAAAACATCAGCCCAGAGTTTTGA TTATCATCCTGTTTTCCCCACAGGGGATAACTTGTAGAAGTGGGAGGGGCACAAAAAAGAGG AGGAAATTTCGGACGCGTGGGTCGACTCCCTATAGTAGN ->342

tATAGGGAGTCgaCCCACGCGTCCGGGGGGCTTAAGCGGGGGGGAGTCGAGCCAGCG TCGCCGCGATGGTTTTTTGGAGAGCGAGCAGTTCCTGACGGAGCTGACCAGACTTTTCCA GAAGTGCCGGACGTCGGGCAGCGTCTATATCACCTTGAAGAAGTATGACGGTCGAACCAAA CCCATTCCAAAGAAAGGTACTGTGGAGGGCTTTGAGCCCGCAGACAACAAGTGTCTGTTAC GAGCTACCGATGGGAAGAAGAAGATCAGCACTGTGGTGAGCTCCAAGGAAGTGAATAAGTT AGAACAAAACTAAGAAGACCAAAGCAGCTTGCAACCACTAGCCTGGGGAGGGTCCGCATGT GTCAAGGGTGAGGCAACAGATGCTGGACCCAGGGAGCTCTCTGCCACAGGTCAGTCTAC AAGGCCTCAGGGACCAACTTGCCAACAGCTGGACTTGATCACTAGCTGGCAAACTGAGCTC ACGTATCGGGTGGAATAACAAGCGGACTTTGCTCTCTGCTGTGCAAAACGCTGTTTTTAGAG GATTTGCCACAGCAGCAGCAGCAGCAGCAGCACCACCGGAGCCCTTGAGACATCCTTGA GAAGAGCCACAGCATAAGAGACTGCCCTGCTTGGTGTTTTTGCAGGATGATGGTGGCCCTTC GAGGAGCTTCTGCATTGCTGGTTCTGTTCCTTGCAGCTTTTCTGCCCCCGCCGCAGTGTACC CAGGACCCAGCCATGGTGCATTACATCTACCAGCGCTTTCGAGTCTTGGAGCAAGGGCTGG **AAAAATGTACCCAAGCAACGAGGGCATACATTCAAGAATTCCAAGAGTTCTCAAAAAATATAT** CTGTCATGCTGGGAAGATGTCAGACCTACACAAGTGAGTACAAGAGTGCAGTGGGTAACTT GACGAGTGCATCGAATCAGAGGACAAGACACTGGCAGAAATGTTGCTCCAAGAAGCTGAAG AAGAGAAAAAGATCCGGACTCTGCTGAATGCAAGCTGTGACAACATGCTGATGGGCATAAA GTCTTTGAAAATAGTGAAGAAGATGATGGACACACATGGCTCTTGGATGAAAGATGCTGTCT ATAACTCtcaAAGGtgtACTTATTAATTGGATCCAGAAACAACACTGTTTGGGAATTTGCAAACAT **ACGGGCATTCATGGAGGATAACACCAAGCCAGCTCCCCGGAAGCAAATCCTAACACTTTCCT** GGCAGGGAACAGGCCAAGTGATCTACAAAGGTTTTCTATTTTTCATAACCAAGCAACTTCTA ATGAGATAATCAAATATAACCTGCAGAAGAGGACTGTGGAAGATCGAATGCTGCTCCCAGGA GGGGTAGGCCGAGCATTGGTTTACCAGCACTCCCCCTCAACTTACATTGACCTGGCTGTGG ATGAGCATGGGCCCATCCACTCTGGGCCAGGCACCCATAGCCATTTGGTTCTCAC. AAAGATTGAGCCGGGCACACTGGGAGTGGAGCATTCATGGGATACCCCATGCAGAAGCCAG GATGCTGAAGCCTCATTCCTCTTGTGTGGGGTTCTCTATGTGGTCTACAGTACTGGGGGCCA

#### Table 4

GGGCCCTCATCGCATCACCTGCATCTATGATCCACTGGGCACTATCAGTGAGGAGGACTTG CCCAACTTGCTCTTCCCCAAGAGACCAAGAAGTCACTCCATGATCCATTACAACCCCAGAGA TAAGCAGCTCTATGCCTGGAATGAAGGAAACCAGATCATTTACAAACTCCAGACAAAGAGAA AGCTGCCTCTGAAGTAATGCATTACAGCTGTGAGAAAGAGCACTGTGGCTTTGGCAGCTGTT GAGTGTGTAGAAGTGGAAATACGTATGCCTCCTTTCCCAAATGTCACTGCCTTAGGTATCTT CCAAGAGCTTAGATGAGAGCATATCATCAGGAAAGTTTCAACAATGTCCATTACTCCCCAA ACCTCCTGGCTCTCAAGGATGACCACATTCTGATACAGCCTACTTCAAGCCTTTTGTTTTACT GCTCCCAGCATTTACTGTAACTCTGCCATCTTCCCTCCCACAATTAGAGTTGTATGCCAGC CCCTAATATTCACCACTGGCTTTTCTCCCCCTGGCCTTTGCTGAAGCTCTTCCCCCTTTTTC TCTTTTCTTTTTTTGAGACAAGGTCTCACTATGTTGCCCAGGCTGGTCTCAAACTCCAGAGC TCAAGAGATCCTCCTGCCTCAGCCTCCTAAGTACCTGGGATTACAGGCATGTGCCACCACAC CTGGCTTAAAATACTATTTCTTATTGAGGTTTAACCTCTATTTCCCCTAGCCCTGTCCTTCCAC TAAGCTTGGTAGATGTAATAATAAAGTGAAAATATTAACATTTGAATATCGCTTTCCAGGTGT GGAGTGTTTGCACATCATTTAATTCTCGTTTCACCTTTGTGAAACATGCACAAGTCTTTACAG CTGTCATTCTAGAGTTTAGGTGAGTAACACAATTACAAAGTGAAAGATACAGCTAGAAAATAC TCTTATAGTCAATGCGTTCATCGTTtcAGCCTAAAAATAATAGTCTGTCCCTTTAGCCAGTTTT CATGTCTGCACAAGACCTTTCAATAGGCCTTTCAAATGATAATTCCTCCAGAAAACCAGTCTA AGGGTGAGGACCCCAACTCTAGCCttctCTTGTCTTGCtgtcctcTgttTCTCTCTTTCTGCTTTAAAT TCAATAAAAGTGACACTGAGCAAATAACCTCATCAGgttATATttGCCcaCATACc >346 >347

AGAAGGAAGAATTTGAAAAAGCCAGTATGGATGTGGAGAATCCTGATTATTCTGAAGAAATC CTTAAGGGCGAGTTGGCATGGATCATCTACAAAAATTCTGTAAGCATAATTAAAGGTGCAGA ATTTCACGTGTCACTGCTTTCGATTGCACAGCTATTTGACTTTGCCAAAGATCTACAAAAAGA GATTTATGATGACCTTCAGGCTCTACACACAGATGATCCTCTCACTTGGGATTATGTGGCAA GGCGAGAATTAGAGATTGAGTCACAGACAGAGAGGCCTACAACGAAACAAGCCAAAGC TCTGCCAACAGAGGCCATGTGGAAGTGTTACATCACCTTTTGCTTGGAAAGATTTACTAAGA AGTCAAATAGTGGGTTCCTTAGAGGGAAGAGGTTGGAAAGAACCATGACTGTATTCAGGAAG GCACATGAACTGAAGCTTCTGTCAGAATGCCAATACAAGCAGTTGAGTGTTTCGTTGCTGTG TTATAACTTCCTGAGGGAAGCTCTGGAAGTGGCAGTAGCTGGAACTGAATTGTTTAGAGACT CTGGGACAATGTGGCAGCTGAAGCTGCAGGTGCTGATCGAGTCAAAGAGCCCTGACATAGC CATGCTTTTTGAAGAAGCCTTTGTGCACCTGAAACCCCAGGTTTGTCTGCCATTGTGGATTTC CTGGGCAGAGTGAAGGTGCCAAAAGCCAAGAAGACACTGAGGCAGTCTTTAAGAAA GCTCTCTTAGCTGTCATAGGTGCCGACTCAGTAACCCTGAAGAATAAGTACCTGGATTGGGC TTATCGAAGTGGTGGCTACAAAAAGGCCAGAGCTGTGTTTAAAAGTTTACAGGAGAGCCGAC CATTITCAGTIGACTTTTTCAGGAAAATGATTCAGTTTGAAAAGGAGCAAGAATCCTGCAATA TGGCGAACATAAGAGAATATTATGAGAGAGCTTTGAGAGAGTTTGGATCCGCAGATTCTGAT CTTTGGATGGATTATATGAAAGAAGAATTGAACCACCCCTTGGTAGACCTGAGAACTGTGG ACAGATCTACTGGCGAGCGATGAAAATGTTGCAGGGAGAGTCAGCAGAGGCATTTGTAGCT AAACATGCTATGCATCAGACTGGCCATTTATGAAGATGAAGAATACAGTCAGCTTTGTGAAAT AGTATTGCAAGCAAGCCCCGTGGGCAAATTTGTATTGAGTCCATCTGTAATTTGCTCAGTGA TGGCAGACAAGATGGCTGTCTGGTTTTGAGACACACTTTAATTTTATGTTAACTTGTTAAATC NNNNN >350

NACAGCTGGCGAGTGTACCCGTTTCTGCGAGAGAAGCTAAAGAATGCCCTTGCGTG AGGAAATTAAATTTATGTTCAAGCTAAATGTCGTTTATGGCACTGGGAACACAAGCATTGTCG TAACAAGTTCTGGTGGAAATCCGTACATGGATACGTTCTCTTCTGGGGGGCGGTCTCCAGTCC TTTCTCATGAGGGAGCACACTCCTCTGCCTCATTGCAGTGGCCTCAGGGATATGGAATTAAG GGCTGGCGATCTGGAGTAAAGGATCCTCACATCCACGTGAACCAGGAAACTCTGTGCCCAA ATCGACGAAAAAAAACACTGGGAGAGCCGAACTAAAAGTCTTTTAGCACGGGTACCAGCC CTAGAATTTCCAGTAGACCAGCAGACAGCCGGGAAACCAGATCCTCATCAAAAGACAGAAA GAAAAAAATTCGAAGCCAGCCTGAGAAGGGCCCTATTTCAATGCTGTTAACCACTGAGACTG CATCCTCAACAGTGAGACAGGATGGACCAACATACTCAAGCTCAAGGAAACATCTAACACCG GTCGGAAACTCATGGGATCACCGGTACCTAGGATTAGGCCATATAAAGTTTACCGTTACAGA CTGGGCATAGGGACCTAGCTGACAACACGCAGTACCAAGGGCCCTTAAAAGCAGCCCAGACC CCCGTCTCGGCACAGGTGCCACATCACGAGACGCTATGGCTAAACCACAGTATAGACGGGC GCCCAAATGAGAGGACACCGGCCGCCTTGGTTGTCACGGCACAAGAGCATCGCCATCAGA GGTAGGGCATAGAACATGACTACTACGCGGAGGGCAGCACAACGCAACACAATATATACAG AAAGAATGAAACGTACAGAAACTTCAGCAAGTGATCTGCTTTCTTGTGTTGTCTTCTCCTGAC CNNN >351

### Table 4

AAGTGGACATTTTACTGGGCTCAAATGTAGAAGACAGAAGTAGCTCAGGGTCCTGGGGGAA TGGAGGACATCCCAGCCCGTCCCAGGAACTATGGAGATGGGACTCCCATGACCACATGACC AGCAGGGACCTGGGTCACATGACCATCTCTCTGCACCTTTGGTCAATTCCAGATTCAAGTTA TACGGAAGGGGCCATTACCTCCTATGGAGANN

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ACTITITITITITITITITITITITITGCCTTTAGAAGGTTAAAATGCCAATATAAAGCTAAA
ACAGTAATCATCAGAGACAGCTCTAATAAGGCTTTGCTACTGTTTTTACTATATAAATCTTTAC
GTGTTAATGGAAAGAAAATTAATTCATTCTGTTACTCCATTTTTTTCTCTCCATATTGTATGCC
TGAAGTGAGCTGATGAGGGGGCAGAAAGATCATACAGTTAGGAATGAAGACATCAGAATGTTC
CACTAAACAGATATTTAACTAGATACTATTATACTACTAAGAATAGCAAGAATGTCTCTCAATT
CTGGGAATTTCTCCTAGCTCACACAAATGAAACGCACATCTCCATGAATGCTTTCTAATAAAT
GCTTCCAGGATAGTATCATAAACAAAGTCAAAATTAAGAAAAATCACCTCCATGGCATCCTGG
TCATTCTCCATCAGCTCACCTTTCTTCTTATCAGAATCCACAACTGCNNN
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NNGTCGCCATTGTGACCCGAGAATTTAATATATCTTGTGCCCCGCGCGTGTTTTGTTA ACCGTCCGCCGAGTGTCCCCTCAATTTCTACCCCTCGCCCCTTAACCCAAAGCTAAATCCA CCATCTGGTATTCTCCCCTAGAGCACCAGATGACCATCTGAAGCTGGACAAGTGTCTCTAAC GGGACAACAGCCAACTGACTCTACCCACTTGGTGAGAAGTGATATACTTCAACTATTTTTTT AATGCTTCTGAAAGTTTCTTGGCCCACAGAGGACTAGGGTGCAATCATTCCCTGTGTTAGTG AGTTGGGTTTAATGCAGCTTCAAAATTAGGGTAAAGGGACTTGGTGAAATGTTTACATTAAAT ATTTCACTCCTACCCATTCTTCAGGAAAAAAGGTGAGCTCAGCAAGGCTGGATGCCATTAAG AGATATITACTGTTTTCTTTTCTATAGCTAAAAAAGCAAACTTTACACGAAGAAGCTCTTGAT TAAGGAAATTTCAATAGATTCATATTTATAAAAATTTTAAACATTTGGCACAGCAAAATTTGGAA AAAATGGGGGAGAAAAAATAGGTCTGGTTGTTGTCCCCCTTTTTCCACCTGCTGCTGGACAG TGATGAGATGCTCACAGAAGAAAAAGGCCTGGCTTTGTACCAGGCTGGCGACAGGTGCTAC CAGGAGTGGGCTGAGGGGAGAAAAACTATCTCCCACTCTTTTGGCCCAGGCAATGTCAACG ACTTCCACATTCCCTGGCCCACTTCCTGAGCAACCCCAGGTTCGGCTCTGTATAAGGACCCT GCAATCAAAGGAAACAGTTAAACACCAAACAATTTCTTAAAGCCAAAAAATATTTTTCATGGA GTTGAACATTTTTCGAGTGTTTTTTTCAAGTGTAAAAGCAGTGACATTTTGTTCAAACAGAA GCAGCATCTAGGAATTCTGGCACTTGGGTTCTAGGGGGTTACAGGTATGCATCATGGATTCT TCTCCCTCGTATTTAAAAAGGCCTCGTGTTTCTATTCCTGAGTTCATACCAACACCTGCTAGC TCTCCCCTCTAGCGGACAGTGGGTGGCCAGCCAGCCTCCCTGGTTAGATTGGGCAATGCCA AGCAGACATCCCTCATTCACCTGCTGGGCTTGCTTTCTGATTCAGAGGTAAGTCGAAGTGCA GAGAAAGAAACTTACAAAAGCACAACCACCAAAGGCAGCCTGAACGGGGAGCCCTGTGCAG **AATTTGAATCAAACATGGGGGAGGACACCTGCCAAGCAATAGTATGATGGACTCAAGTCATC** CAAGCACTGTAGTTTAAAAAGGAAAAAACACCCCCCACCATTAAAAGACAACCTTCAAATGTT ACTCAGTATATAAAGTTTGCTTAGGCTAAGGTGGAGTCAGAAATGTCTCTAATTGTAGACACC ATCTCTGTGCCACCCTTCCTCTCATCGGATATGGAGTGATTTCTTCTCTCGCTGCTGCGACG CAGATCTGAGCCACAGTCAGGTACCAATGTACACGACATAGGCACATGTGCAAACACAAAGA AGGTGGGCTGCTTCTTTCTCTCTGCCCCTAGTCCAGGCTCCTTTGCTTCACGTAAGATT

AACACTTTCCCATTCCTCTGAAGTTGCTGGAAGGACATTTCCCAGGAAGAACAATTCCTCA CTGCCTATAAACTGTAGTCTCATGTGGGATAGTCAATTGAACATGAGAATCAGAACAATCTG CATCCACTTGTACCCCCAGCTACCTCCCATGTTTCCAGGTATCATTGGCTCTTAACTCCCACA AGCCTGCCTTTTGGCTACCCATCCCAACAATATCAAGAGGGAATGACTAAGTATCAGCTAGA AACTTAGCCATGTCTCAACATTCCTGGATTATCTGAAAAGCTGTCGATGCCCTTTTACAGGTT TATGGTGACAGACCCGTATCATCTTAAAGTATGTTCATAGTTAAGGCTTGACTTAAGAAAATA AGAGAACCAGACATAATGGAAAGACCTCTTCAATAATGTTGTCATGCCTCTCAGTGAACGTG CTCACAGTCACACTTGGTTTGGCTCCCCAAACCCACAATAGAAAAGGAAAAATGAGTATTTT GTTTTCATCTGTTTTGTATTTAAAGGCATTGGGTTACTTCCTCCTGCCCTCTTTTCTTCCCTG AACAAGAGTTTACAACTCCTCATGGCTTCTTAATAGGTGAAGTAGGTGAAAAGTCTGAGAAG CTCACAGCAGGGTTTGCCGTCCCAACTATGCAGCTGAGAGGTCGCCAGCTCCTGTGCCTTC CCAGCCCCACTATAATTGGCAGTATGTTTGTTCATGTTTCCTGAAAACATTTTCTTTAAAAAG GACAAAGAGCAACATCCAAACATTCCCCAAGCCCCACCCCAGTAAGTCTGAGATTATCTTAT TCCTTCCCTGAAATAATTATAAAGAAGCATTTCAGGCAAAATACTTAGTATTAATGGTCTCTTA CATTAATGGCTTTCCACATACAAATACAATAGAAAAGAAGAAGTCTGGAACCTGACTATCAT GGGACCAAAAAGTATCTTGGCCCTTTGGGAGTTTCCTTGTCAGAAAGTATAAGCCTCAACAG AAGTGTGTTCATATCCCACCTAATTTACAACAGAAGATAACCCCATCCCATCCCAAAACATA **AAAATACAAGTCTATGCCCATAGAACN** >357

ACGATCTCAGCTCACTGCAACCTCTGTCTCCCGGTCAAGTGATTCTCCTGCGTTAGC CTGCCAAGTAGCTAGGATTACAGGCACCTGCCATCACGCCTGGCTAATTTTTGTATTTTTGTA GAGACGGGGTTTCACCATGTTGGCCAGGCTGGTCTTGAACTCCTGACCTCAGGTGATCTGC CCACCTCGGCCTCCCAAAGTGCTGGGATTACAGGCATGAGCCCCACGCCCAGCCCACACT TTTAATTAATGGAGAATTGAGGCTACTAAACACATACTTCAAGGTATGAAAGGAAATTTGAAC CACTGTTAAGAATTATTCTGGAGAATAAAAGGATCTGAAGGTGGCATCAAGAGAATCACCCA TCTCCATATATGGGAGCTACTCTAGAAAGAAATGCAAAAGGTATATTTCAGTAATCTTTTCCC AACTTCTCTGTTCCCCTGACAATACTGAGATCAACAGAAGCATTGGAAGGTTTCTTTTAGATA ATAGTGAGAGATACAGGCAGATTGCTAGCCAAATACAGCTCTGGGTTACTGTGATAACACAG GTTCCTTCGAATGTATTTATTTTCCCAAATTAAAAATAAGCAGGGATGGAAGTAGTTATTATGC ATTTTTCAAATTCTCCTTTCAACAGTCTATATAAATGTTGCAGAATGCTAGACTAGGATGAAAA GTAGGAGTCATGAGAACTGCAGAAGCCTGAGATCCTAAAGGAAGTGTACCATCTGACTTGG CAATGTAAGACACACACTTAGTGTGGGGCACAAACGTGGAATATTAGGAGAGAGCTGGTT CCAGCACCAAATCCAGAGTCACTCGGGGAAGGAGGTATGGTGGCAACACTTTATGCTTAATA TTCAATTCTGCTCCAGTAGAACATGGTACCTCGGCCGCCACCAGTTCAAAAATTATCTTTGAT TCATTTGTTCCCCATTCCTCTAATATGTCACCAATTCTGCTGATACATTCTTTGTAATCTCTC CATCTATTTTAATCTGTTATTCACCTGAGCTACAAACATTCATCTGCACAAGGAGTATTCCA CGTGCTGAAAAGACAGAGGATTAAGCCCTCCTTGTGGAGGCATTCACAGTCTGGTTTTAATA CACAAACCAACAATTATAATACACAGGGATAAAAAAAGTAGAGGCACTTATTGCATACCTG >358

NNAGAATTGTTTCAAGATTGGTGCTTTTGCACCATTGATTAGACGAGGCAACCAA
GTGCATTTATTTTGATGCATGCCTGGCCCCTAATCTGCTGAAGAAAAGAAGAATAGAAGAAAAT
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TCTGGAAATACATTAAGGATGGTGGGGGGTAGATAATCCATTCAGCCAGACAAACGGGGCCA
GCTCTTAAAATAAGAAAGCTGAGACTGAGGAGGTGAAACTGAAAATAAAAACAGAAAGTTCA
TCCTCTAATCCCCAGTGCTGTATTTCTTCAAGGTGCATCAGGCCTAGGACAGTGGTTAAGTG
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GATCAGCTACATCTCCTTAGGTTCCATACTTATCAGGGGGCTTTTTGACATGGAAGAATTTTTTAGCACA
ATTGGGGAGCAACCTTCTGAGAATTCAGCCTTTTGAAGTAATTCAAAGACAGTTTCTTTAGCACA
CACGTTAACTCCAGACACAGCAGTGGTGGGTGCCTCCATTGAGGTTTCCGTTTTCTCTTCTG

#### Table 4

TCCATCAAGGGCCCAACATCCAACTGGTCCCACAGTGAGCAGGGGCAACTCTTGCTTCTTC AGCATCTGGCCACTTCGTTTCCATGGTAACTGCCACGTGTACTTTTCTAGCAGTCTGTGGCC ACTCCATACTCAGCTGAAAACACTGTTTCAGCCCCCTCTCTGGTGACCTCAGCCTTCTCCAG GTGTATCTCTTGATGATCTTGGAGACCAGCAGCCACAGCTGCTGCTACTCCTGCAGGAGACT GTCAGGCTGTGGTGGGGGCAGGGGTGTTGGAGGAGAAGTTGAAAATCCGTGTGTTCTCT GCCCCTCTGCTCCATCTTAGCTTCTGGAGGAGTTAAGGCACCAAGGGCACCAAGTCAG GTTGGCAGTTTTGCTGCCCTTGCCCAAGCCTCCAGCAAAACTAGCTGGTCCCCTGCTTTGCT GGGTCCCAGCCAGGTGTGATTTGGTTGTTGATTAGTAACCACACATTGTTTTTCCCCACCTTT TTCATTAGTGGAGGTTTGTATGTGTGTTTGTTTGAGACAGAGTCTCACGCTCTTTTCAGA CTGGAGTGCAGTGCGATGTCAGCTCACTGCAACCTCCACTTCCCGGGTTCAGACGATT CTCATGCCTCAGCCTCCTGAGTAGCTGGGATTACAGATGTGCACCACCACCCTGGTAATTT TGTATTTTTAGTAGAGATGGGGTTTCACCATATTGGCAGGCTGGTCTCAAATCCTGGACTCA GGCGATTGGCCACTTGGCTCCCAAAGTGCTGGGATTAAAGGTGTGAACCAACGTGGCCTGC GCCCATTAGTGGAGTCTGATGGGCCGGGCTCAATATTATTCATGGAAGAGAGACATCTTGGT GTCCATGGAGAAAATGGGCGGAGTACACATTTGGGCGGTTTTCAGCCCCTTTTTGTTAAACC CTTTCACTGGGTATACCGCGGGAGAGTATACCCCCCGGGGCAGCGTTAAAAGAACCGCCC CTTGTTGGCGACAAGANNN >359

NNNNNGNNGNNNNNNNNNNNNNNNNNNNGGNNNNNCNNNNTTTGCCNNTTAN CGGTNAACCCNNTTGGANNCCGANTNCCCCCCCANCNNAANCTNTNAACCNTNNNGTGAGG GCGGGTTGATTTTCTCACTTTGGACTGGTTTTTACTTCCCGACTTCTGGACTCATCTTTCAAG AGGACTITAGACTAATTGCAGATAATTAAGAGAATATGCCTTCTGCATCCTGTGATACACTAC TGGATGACATCGAAGATATCGTGTCTCAGGAAGATTCAAAACCACAAGATAGGCATTTTGTA AGAAAGGATGTTGTCCCGAAGGTACGAAGGCGAAATACCCAAAAATATTTGCAAGAGGAAGA **AAACAGTCCACCAAGTGACAGCACTATTCCAGGCATACAGAAAATTTGGATACGAACATGGG** AAATTACAGAAAATGCATCCGATGCAGATTTATGGCTCCTGAACAGTTGCACTGTAAAAAACC CAGCTGAAGACCACTTTAGAAACTCAATTAAAAAAGCTCAAGAGGAGAACAAGAAAATCGTA CTGGCTGGATGCGTTCCTCAAGCCCAGCCTCGCCAGGACTACCTTAAGGGACTGAGTATCA TTGGGGTTCAGCAGATAGATCGTGTGGTAGAAGTTGTGGAGGAGACAATTAAAGGTCACTCT GTGAGACTGCTGGGTCAGAAAAAGGATAATGGAAGGCGGCTTGGGGGAGCACGATTGGATT TGCCGAAGATTAGGAAGAATCCACTGATAGAAATCATTTCCATCAGTACCGGGTGTCTCAAT GCTTGTACCTACTGCAAAACTAAACACGCCAGAGGAAATTTGGCCAGTTATCCAATTGATGA ACTAGTAGATAGAGCCAAACAATCTTTTCAAGAGGGTGTTTGTGAGATATGGTTGACCAGTG AAGACACGGGGGCTTATGGCAGAGATATTGGCACCCAATCTCCCCACACTCCTGTGGAAACT GGTTGAAGTGATTCCTGAGGGAGCAATGCTGAGGCTTGGCATGACAAATCCGCCCTATATTT TAGAGCATCTGGAGGAAATGGCAAAAATCCTTAATCACCCCAGAGTCTACGCTTTTCTGCAC ATACCAGTCCAGTCTGCCTCCGACAGCGTACTCATGGAAAATGAAAAGAGAATACTGTGTGGC TGACTTCAAAAGAGTAGTGGATTTTCTGAAAGAGAAAGTTCCTGGAATAACTATTGCTACAGA TATTATCTGTGGTTTTCCTGGAGAAACAGATCAGGATTTTCAAGAAACAGTGAAACTTGTTGA AGAGTACAAATTCCCAAGCCTGTTTATTAACCAATTTTACCCAAGACCAGGAACTCCTGCTGC AAAAATGGAACAAGTTCCAGCACAAGTGAAAAAGCAAAGGACAAAAGATCTTTCTCGGGTGT TTCATTCTTACAGTCCATATGATCACAAGATTGGTGAAAGACAACAAGTGTTAGTAACAGAAG

# Table 4

AATCTTTTGATTCCAAGTTTTATGTTGCACACAATCAATTCTATGAGCAGGTTTTAGTGCCAAA GAACCCTGCGTTCATGGGGAAGATGGTTGAAGTGGACATCTATGAATCAGGCAAACATTTTA TGAAAGGCCAGCCAGTATCTGATGCCAAAGTGTACACGCCCTCCATCAGCAAACCGCTAGC AAAGGGAGAAGTCTCGGGTTTGACAAAGGACTTCAGAAATGGGCTTGGGAACCAGCTGAGT TCAGGATCCCACACCTCTGCTGCATCTCAGTGTGACTCAGCGAGTTCCAGAATGGTGCTGC CCATGCCAAGGCTACATCAAGACTGTGCGCTGAGGATGTCCGTGGGCTTGGCTCTGCTGGG TCTTCTTTTTGCTTTTTTTGTCAAGGTCTATAATTAGAATACAACTAATGGAAACATCTATAAA GAAGAATACATTTCTAATTAAAATCTTCAATGAACAGGAAAGCGACATCTCCATTCTCCAAGG GCAATAATTTGTACTGGTCATGCTGCCTCCTTCTCAGCCACTCTTCTTAATGAGGCTCCCCCT GTCTCACATTGAGTTGGGCCCATTGGTTATTTGACCTAAAACCTAATCACGGCTACCATAGC ACATCCTTCAAATTAAACTGCTTTTGGTTTACTTTTAGCAAGAAATGCAAGCGGTTGCATTTTT TTCTGTTTGTTTCAATCTCTAATCTTTAAGTCAGAACCTAATTGTACAGTGGCTCTGGCCATCT AGTTTCGCTCTTGTCCCCCAGGCTGGAGTGGTGCAGTGGCACGATCTCAGGTCACTGCAAC CTCTGCCTCCTGGGTTCAAACGATTCTCCTACCTCAGCCTCCCTAATAGCCAGGGGCTACAG GCATATACCACCATGCCCAACTAATTTTTTAATTTTTTGTAGAGATGAGTGTCACTATGTTGCC CAGGCTTGCCTGGAACTCCTAGCCTCAAGCAGTCTTCTTGCCTCAGCCTCCCAAAGTGCTG GGATTACAGGCGTGAGCCACTCCACCCAGCCCAGATTAAATGTTTTTATTTCTACCTGCCAT CATTGGTCTTTACTAAGTGAAGTGACTTCTTTCTTTAACAATAAATGGAATTGGTATACTAANN NNNNNNNNNNNNNN

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ATATCCTTTATAGCTGTTTATTTTTAAATCCAGGATCCAATCAAGAATTATACGTTATA ATGACACTGACATTATTAAAGAGTTCAGGCAAGTTTGTGGAATGTCCCACAATCTAGACTTTT TGATGTTGTTTCCTTACTACTGCCTCACCTCAGGAAGCACATAATGTCTACTTGTCTCTTTTCT GATATTAGGACTGATCAGGTGTTGTCTGCCTGATCCAATCATTATCAAGTTCCATAATTCATT ATTAAGCTCTGAAATTCAGGACACATACATTTATAGAGTGTGAGGCTGTGCATACGTACATTC ATCCCTTAATGTTCTCAAGGAGGCCCAGGATCCCCAAAATATTATAAGCATTGCAGTCAGAT GATATAGCACTAGCAAAGCATTCATCCCTTTCCATATAACAGGAGGGGAGGGGAAGAAGGAA GTTTCCATGTGCAGGCAATACGTGAGAGCATGGGCAAGTGAGGATTTGTATGCTCCCTGTA GCCAGAGGTGAAATATTCAACGCTTTTATTTTTTCTCCCGTCTTCAATGACCTCCCATTTGGA CCCATAGTTTATTTATAGAGAGCACACACTCCCTAATTGTCAGATGGTTTTTTTGGGAAAACT CTTAGATAGTACAGTGAGTTGTGACCCTCCAAAGGATCACAAGTACATAAACAGATACAAAG TATTTATGTGGTATTAAAATTTCATGGTGATGGTGCAAGGGAGAGATGATTAGGAAGAAAATG TCTTAAACGGCTGTAATTGAGAAATACTGATCTAGAGTCATTTCCTGCTTCTTAAATTGTTCGT TITCTCTTCCCTGGGTATTTTCTCATTTCCAAAGACCCAGAGTCTCAGAGCCAGTTTAAGTGG AAGAAACTTTGAGAGGTTTCTTAATCAATTCCTTCTATCTCTCAAACCATGCCAGTAACTTCCT TGGTGAAAAATCTATACTCCTCTCACAGTTCTTCGGGCATGGAAATTCTATAGCATTCTTTG GTATAACCAACCCACTGAACCCTCCACACATCTTGAATTCCATTCAACTCGAGCTGAAGTAT TCTTTTTGAGTTTCAGTATATCTTTTCTAGTGTCCCACTTTTAGAAAGGTCCAAAGATGATATA TAATAAGTGAAAATACAATTAATCAGAGCTTTATTTGCATATCCATTAAATATCTGAAGGCTAT TACCAGTTGTGCTTCAGCCTCCTTTCCCTTGCAATTCTCCCAGGGTGGCATCCTCTACGGAG TCTTGTTGCTCCATTGTTGACCACTGATGTAACTCAACGTGAAACCTTCCCAAAGCTCTCCAC ATCACTCTCTGTTATGGCTGTGACCAGCAGTGAACATGAAAAGAACTTATTTCATGCCTTCTC CAAACTATATTGTTTCTTTGCTAAGTCCAGACCTGCTTTTTCTACATTTATAGGTTTTCTATTTT AATCGCCATGCAAAATTCTTTATCATACTCAATCATTTTGGTTTATCTTCCTGACTTCTTACCT GGCAAAACATTAAGGGACTTGAATAGAATTACACTTATCTTTTTGTGCTGATTTATGTCAATCC ATCATTCTGGTTATTGATGGAAGCAAATTGCTTCCTATGTTCTCTAAACCTTATGTCCCTTCCA TACTCCATGAGTACCACACTGGGAGAAAACAAAAGCAAAAAGATTGTGGGAAAAGTATAGCC ATTATCTTTGAGGAAATGTGTACCAAGGCACAATCATTAAAAGGAGTTGGAGGCATCATTTG GTTGACACTGTTGTCTTGTTCTGATCATTTTTGGACCTTGAAGAAATTGGTGATTCTCTC CTAGAATTAGACAAACAAAGTGTTTTGGAAATAATGATTGTTTTCCTGCCTTAAAAAAATATAT

#### Table 4

TTGGAGCTCCACGCGGTGGCGGCCGAACGTTGGCTTATCATAATATTGCTGACAGC AATAAACTGCCACATCTTCAGCCTGCAGGCTGCTGGTGGTGAGAGTGAAATCTGTCCCAGA CCCGCTGCCACTGAATCGGTCAGGGACCCCGGATTCCCGGGTAGACGCCCAGTAAATGAG CAGTTTAGGAGGCTGGCCCGGTTTGTGCTGGTACGCGGGAGAATGGCTCGCAAGCTGACT GTGAGCTCGGAAATCCTTTTAAAAGAAATTCAAATGTCACTTTTTATTTGGTTTTAAGTACCTC GGCCGCCACCGCGGTGAGCNNN

>364 >365

NNGAGAGCGACGCGACATGTGGAGGGTCGAGAGGTTCAAGATGTTGGATGTGGCG CCCCCCCGCATTGCTGTTGAAGCATTGCCGGCGGGGGCACGGATTCCCGCTGTGGAAGG CTGACCAGGCATACTGAAGCCGGGAGTTGAGACCGCCTGGCCAACATGCGAAACCCATTTG GTCTGTAAGATATACAAAAATTAGCCAGGCATGGTGGCGCAAGACAGTAGTCCCAGTACTCG GGAGGCTGAGACAGGACAATTGCTTGAACCTAGGAGGTAGAGGTTGCAGTAAGCCAAGATC ATTGACTTTGGAACCTCAGATTACATATCAGTTTGCATACATGCTAAACAGAGAAATGTCCTC AAAATTCAGTTACTAAAAATTACTGATATCTCCATGATTAGAACCACACTGTGGTTGTGTG TAGTCAAAGGAGGAGAATTTTTAATGCTATATAAGCATAACTGATAACTGCTATTACAAATAAA AAAAGAAAATCAAAACAAATAGAAACTCTGGGGAACAAGTGAGTTAATTACCGCTCATGTCTC CCATCCGGTTCTCTAGCTCCTTGAGGGTTACTGTCTAATGCTCCACAAAAGTGCCTTACCCA GTGCTTGGTACAGAGAAGGCACTGAATAAATTCACAAAGGCCGATTGGTTCACCCATTCTTT TAGAGACACAGACACGCAATTCTGACGAGGACTCCTGTTACTAAAAGACACAGCCTCTGAT ACAAGAGAGATATCCCTTTGACTAAAGCATTACCAGGGTCCCCAGGGCCCCCTCCCACTGG GGCGGTAACACTACGGGTCTCCCCACCATATATTCCATGTCAAAGTATCTACACAAATACAG AGGAAATTAAGCAAGTAAATACGGTATGTAATTGTTATCATTTGTATTTCTTTAAGGCATATTT **ATAAATATTTTAAAGTAAACAATATGAGTGAGTGCCTTTCATTAGCTATGATCTTTCATACTGA** TATATTTTGACTGATCTGAATAAGCAGGTTACTGTGGAAGCATATAACATAAAACAGCTAATA TGATTCCAGTGGGTACAACCAAGTGTCAGTACTTGATACATAACTCTATCCCATCATTCGCAA TTACAGGCTGCTGTGGGAGTATTAAACATGCATCTTAGTTTTTATTTGTACACAATGGTCCA **AATTITCACTTACATATAACTITCCAACTGTGTAAGTGTTTTGAAGCAATTATGTTTTTCATTTG** TTTACATGGGATACAATAAATCGGACGCNNN

NGAGCTCCCGCGGTGGCGGCCGAGGTACTTTGCATCCTTCAACCCAATCAAGCTG
ACACTCAGTATTAACCATCACAAGGCGTGAGGACAGATAGCTGCATCCGCAAAATAGAGAAC
CAAGAAATAGTCCCACACCAAAGTCAGGATCAAATGATTCCTGGACAAGCCACCAAGTCAAT
TCAACTGAGAGAAAGAAGCCTTTGCACCAGTTGGTGCTGGAAGTTCTGGATATGCACCTGGA
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CACACCTTTAACACCAGCATGTTGGGAN
>367

CACTGCTCACTTCATTAAGGGAGTCCAGTAAGGCTTTGTTGTTCTTAGCTTCCTTTTTCAGTT CCTTTGGTCTCATTTGTGCTTGACTTGCTTCTCCTTTCAGAACCTGAGTTTCATATGAAA GTAATTCCACCTCCACTTTGTCCAGCCAGGTACACAGCTCTTCGTGTGTGGAGTGCAGCCG CCTTGCAAGCTGCAGCCCtgattcCAGAGTCTTGGCCACATCAGTGCTCAGTTTAGTAATGTC TTTGTACCTTGCTTTAATGGCTTCCAATTTATCTTGAATTATTAAAACTTCATCACCTGTGGTT TGTTTAAGTAGTTCTAAACCATTTAGTAAAGCCTGATCTACATTTTGTTTCCTGAGTAAGATGT CCTCTTGCAGAACCCGAAGTTCAGACTGCTGCTTCCATAGCCCCTCAGTGCTGAATCCTGG ACTGAGAGCTTGCTCAGTTTGTCATGCACTTCATTCAGCCAGTTCATCAGCTCAACTTCATCT TCCCCAAAAATCTTAGCATTACATAAGGCCTGCTGGAGGAGCTCAGACCTGCTGTGACTTTT CTCTTGAATCTCAATGTAcnnnnnnnnnnnnnnnnnnnnnnACGCGGGggaagcgGCTCGAGGCTGG AAGAGGATCTTGGGCGCCGCCAGTCTTTAGCACCAGTTGGTGTAGGAGTTGAGACCTACTT CACAGTAGTTCTGTGGACAATCACAATGGGAATCCAAGGAGGGTCTGTCCTGTTCGGGCTG CTGCTCGTCCTGGCTGTCTTCTGCCATTCAGGTCATAGCCTGCAGTGCTACAACTGTCCTAA CCCAACTGCTGACTGCAAAACAGCCGTCAATTGTTCATCTGATTTTGATGCGTGTCTCATTAC CAAAGCTGGGTTACAAGTGTATAACAAGTGTTGGAAGTTTGAGCATTTCAACGACG TCACAACCCGCTTGAGGGAAAATGAGCTAACGTACTGCTGCAAGAAGGACCTGTGTAAC TTTAACGAACAGCTTGAAAATGGTGGGACATCCTTATCAGAGAAAACAGTTCTTCTGCTGGT GACTCCATTTCTGGCAGCAGCCTGGAGCCTTCATCCCTAAGTCAACACCAGGAGAGCTTCTC CCAAACTCCCCGTTCCTGCGTAGTCCGCTTTCTCTTGCTGCCACATTCTAAAGGCTTGATATT TTCCAAATGGATCCTGTTGGGAAAGAATAAAATTAGCTTGAGCAACCTGGCTAAGATAGAGG TCTAAGAGTGAAGTAGGTGTGACTTGAACTAGATTGCATGCTTCCTCCTTTGCTCTTAGGAA GACCAGCTTTGCAGTGACAGCTTGAGTGGGTTCTCTGCAGCCCTCAGATTATTTTTCCTCTG GCTCCTTGGATGTAGTCAGTTAGCATCATTAGTACATCTTTGGAGGGTGGGGCAGGAGTATA TGAGCATCCTCTCACATGGAACGCTTTCATAAACTTCAGGGATCCCGTGTTGCCATGGAG GCATGCCAAATGTTCCATATGTGGGTGTCAGTCAGGGACAACAAGATCCTTAATGCAGAGCT AGAGGACTTCTGGCAGGGAAGTGGGGAAGTGTTCCAGATAGCAGGGCATGAAAACTTAGAG AGGTACAAGTGGCTGAAAATCGAGTTTTTCCTCTGTCTTTAAATTTTATATGGGCTTTGTTATC TTCCACTGGAAAAGTGTAATAGCATACATCAATGGTGTGTTAAAGCTATTTCCTTGCCTTTTTT CATGTGACTGGCAGTATTAAGTGTGCTTATTTTAAATGTTACTGGTAGAAAGGCAGTTCAGGT **ATGTGTGTATATAGTATGAATGCAGTGGGGACACCCTTTGTGGTTACAGTTTGAGACTTCCA AAGGTCĂTCCTTAATAACAACAGATCTGCAGGGGTATGTTTTACCATCTGCATCCAGCCTCCT** GCTAACTCCTAGCTGACTCAGCATAGATTGTATAAAATACCTTTGTAACGGCTCTTAGCACAC TCACAGATGTTTGAGGCTTTCAGAAGCTCTTCTAAAAAATGATAACACAggcccaagatgagggtacc gagetegaa >368

NNNNCGCTCTTGTTGCCCAGGCTGGAGTGCAATGGCATGATCTTGGCTCACCACAA CCTCCGCCTCCCGGGTTCATATGATTCTCCTGCCTCAGCCTCCCGAGTAGCTGGGACTACA GGCATGCGCCACCCCCGGCCAATTTTGCATTTTCAGTAGAGGCGGGGTTTCTCCATGT TGGCCAGGCTGGTCTCCAACTCCCGACCTGAGGTGATCTGCCCACCTCAGCCTCCCAAAGT GCTGGGATTACAGGCATGAGCCACCATGCCTGGCCAAAAATAAAGAACTTTTAAGACAAACC TGAAAATCCCAGTAAGAGCCATCTTTTGACTGGCTTTATGTTACTCTTCAGATACCGTCTAAA AGGCTCAAGACCAGCCAGATTTTAGGTAGGGTTTTTTGCTGCAAAGTAGAAGCCTACTGTCT CTAGAAAAGAAACGCAGTACTTAGGGATCAAATGGGGTGGCAGTGGGGAGGAGGAATAGTC ATAAAGATCAATGGTCATTAAAATTCATTCCAAAACAAAACTGCATATATACTTTGGAGCTCCA CTTCTTTGTTTTCGTAAATAAAAGAAACTAATTGACGAGTATGTACAATGTGCCAGGCACCTT GTCTTGAGCCAAAGAATTACCTGGGGTCCGTTGAGTTTCAAATCTGAAAATTTCTGTCTTTCA AGGTCAGCATCGCCCACAAACCGGCCGTTCTGAAACACAGCCCACAAGAAGACAATTCATTT TGTGGCCTTCTTTTGCTCTATCAAATACAAACGATCTTTTTTTCAAACAGGAAAAGGGCTTTC AAGAAGATATGTGTGGCCTGGAGTCCTTGTGTCAGTACTCATAAAAGAACCATTCACTCTTTA GTCTTAGCACTTTCCTCAAAATTGAAAATCAGGCCTGGAACTCTGGCAGACAGGGTCTCTGG **AACATAAGAACGTAAACTCCACGAGGGCAGAGGGTTTTTTGGGATAAGTTTAGTTTAGTCTA** GTGCCTTGAACAGTGCCTGGCACATAACAGGTGCTCAAAAACTATTTGCTGAATAAACAGCA CAGACCTAGATAATTTCCCTTACATGCAACCTTTTTGGAAAGCCATAAAAATGTAAGGAAAGT

## Table 4

TTGGAGCTCCACGCGGTGGCGGCCGAACGTTGGCTTATCATAATATTGCTGACAGC
AATAAACTGCCACATCTTCAGCCTGCAGGCTGCTGGTGGTGAGAGTGAAATCTGTCCCAGA
CCCGCTGCCACTGAATCGGTCAGGGACCCCGGATTCCCGGGTAGACGCCCAGTAAATGAG
CAGTTTAGGAGGCTGGCCCGGTTTGTGCTGGTACGCGGGAGAATGGCTCGCAAGCTGACT
GTGAGCTCGGAAATCCTTTTAAAAGAAATTCAAATGTCACTTTTTATTTGGTTTTAAGTACCTC
GGCCGCCACCGCGGTGAGCNNN
>371

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ACGCGGGGAAGAAGAGAAGAAGAAGAAGAAGAAGGAATGAAAGCCTGGAGAA
AGAGGATGAAATGACGGATGAAGCAGTTGGAGACTCTGCTGAGAAGCCTCCTTCTACTTTTG
CCTCACCTGAGACTGCTCCAGAAGTGGAGACCCAGCAGAACTCCACCAGCCTGTGAAACCAC
GAACCCTTCAATCAAGAAAAGACCTTTGATCAGGAGAAGACTTCTCGTCTCATTTCTGGGGA
CACATTCAGGATTTCTCCAAAGCAGGTGAAGGTACGCTCGAGCGTGGTCATTGAGGACAAG
TCGACGAGAGATCCCGAGTACATCTACAGTCAGCCTTACGTCTGCAGGTGTACCCAACAGC
TCCGAAGAGACAGCGACCATCGAGAACGGGCCATGATGACGATGGCGGTTTTGTCGAAAAG
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GAAGTAGACATGGGAGACTCCATTTTGTTATGTGTTAAGAAAAATTCTTCTGCCNN
>374

NNCTAATCTCTTCTAGGCCCCGCCCCTTCTGAGCCCCCCCCTCCTTCGGCCTGTATG ATAGGCTCTTCCTCCATTTCCGGCTTCTGGGACTCGGGTGCACCACGGCTTCCGGTGTCAT GCTCCCGTGTCCGTGCCCTTAACCCACACCGATGGCGGGATCCGGCTGCGCCTGGGGCGC GGAGCCGCCGCTTTTCTGGAGGCCTTCGGGCGGCTGTGGCAGGTACAGAGCCGTCTGGG TAGCGGCTCCTCCGCTCGGTGTATCGGGTTCGCTGCTGCGCCAACCCTGGCTCGCCCCC CGGCGCCCTCAAGCAGTTCTTGCCGCCAGGAACCACCGGGGCTGCGGCCTCTGCCGCCGA GTATGGTTTCCGCAAAGAGGGGGGGGCGCTGGAACAGTTGCAGGGTCACAGAAACATCGTG GAACTCCTGGATGTCAGTGTTTCGGAATTGCTCTTATATTCCAGTCACCAGGGTTGTTCCAT GTGGATGATACAGCATTGTGCCCGAGATGTTTTGGAGGCCCTTGCTTTCTTCATCATGAGG AAACTCATTGACTTTGGACTTAGCTTCAAAGAAGGCAATCAGGATGTAAAGTATATTCAGACA GACGGGTATCGGGCTCCAGAAGCAGAATTGCAAAATTGCTTGGCCCAGGCTGGCCTGCAGA GTGATACAGAATGTACCTCAGCTGTTGATCTGTGGAGCCTAGGAATCATTTTACTGGAAATG TTCTCAGGAATGAAACTGAAACATACAGTCAGATCTCAGGAATGGAAGGCAAACAGTTCTGC TATTATTGATCACATATTTGCCAGTAAAGCAGTGGTGAATGCCGCAATTCCAGCCTATCACCT AAGAGACCTTATCAAAAGCATGCTTCATGATGATCCAAGCAGAAGAATTCCTGCTGAAATGG CATTGTGCAGCCCATTCTTTAGCATTCCTTTTGCCCCTCATATTGAAGATCTGGTCATGCTTC CCACTCCAGTGCTAAGACTGCTGAATGTGCTGGATGATGATTATCTTGAGAATGAAGAGGAA TATGAAGATGTTGTAGAAGATGTAAAAGAGGAGTGTCAAAAAATATGGACCAGTGGTATCTCT **ACTTGTTCCAAAGGAAAATCCTGGCAGAGGACAAGTCTTTGTTGAGTATGCAAATGCTGGTG** ATTCCAAAGCTGCGCAGAAATTACTGACTGGAAGGATGTTTGATGGGAAGTTTGTTGTGGCT ACATTCTACCCGCTGAGTGCCTACAAGAGGGGATATCTGTATCAAACCTTGCTTTAATCAGTA ACCTAAGGACTGTTTCCTTTTTCTCCTCTTCCATTTCTTGGGTTATTCCACATATGAATGCAG GACTACCCCTTACCATTTTAAGAAGGTACTTTATACATTTTAATCCTACTAATGTGCAGC CATTGCCCAAGCAGTGACTGCGTTGCATACATTTGGCACTGAGTAGGACAAGACCTCTCAGC TATACATTGAGGGGTTTTAGAGCATCCATGTGGGCAACCCTTTTTTGTGCGGGAGAGCAGGT GTTGCTCTTCAGTATGTAGCCTAAAAAAATCTTAATTATTTCATGGATCATGAAGCAAGGATG **AATAATATCATGTCTTGGTAAATACTAACAAATTTGTTAGGTTTGGTGACATCATTTACAGATT** ATTTCTTTATGTTGTCCAGTGGTTCTTCCTTATTGTTGATATCCATAAGCTGGCACTGGATGC TCTCAGTAATGTTAAGTAATTGTCAAGCAGCAGTTACCTACTGTGTTCTTAACACTGAGTTGT GAATTTTTCTTAAAGCAGTACTGTAGTACTGAATATTCCTTTAAAGGAACTGCAGTGAGCCT ATCTAAGTTTTTTAAATTAAGGCTTTTAAAATAGAAAGCTGATGCTTGATCTTGCACAATTTTT TGTACTTTATAGTGTGAATCCTGTGAGCTAATACAGTCTATACTTATTTCTTCCCTACCTGTTT ACAAAACATAATTCCTGAGAGGCCCAGAACAAACTGGAGTCTAGCCTGGAGTTAAATTGAGA CTTCTAAAATGATTGGAACAAAGACTAAGTTGTGCCAGATGTAAATCAACCCCTCTTTTAGTT TACTITAGACTITGTATTAGCTCATCTTTTTTGTAGTAAATCTATAGTTTTAAGGTTTCTCAAGA TGTGGCTCTACCTACTATGAAAATTGAAGTGGGTCAAAAGAATTAGATGTACAGTGAAG GGAAAAGAAAAAAATGGGCGAAGAGAGGGTGGAAAATAAAAGGATTCTTTTTTCTTCCTTT

# Table 4

CTGTTTCTCGTATCCCTGCTCCCTTTTTCCTCCCCCTCCTCATTCTTTGCCTCATCCTTAGC TGAAGACAAACTAGAGGAGCAGCATCCCAGGTAGTTTGGCTTTTGACTGCAAGGTAGTTAAG GATTCATAGCAACATAATGTGTCCCTGAGTAGAGGATGCTGCTATGCGTGAGTTCATGGACA CAAGTTGATTACATGGTTTTTAGAATTATAATTATGGATTCTTCTTATTTCATGGTAGGTTGTC TTATATACAGGTTATTAATTTTTTTATTTATTTTTTCCTAAGGAAAAAGTCTTCTATCTTTC CCTGCTGGAAGCCTCCTCATATTTCCTTATGTTTGCCATGCAGGTTGCTGAGAGTCCAGTTA AAATTTGCATTTTACAGAATGAAATACTTTACCCCATTCAAACAATTATTGTTTGACATTTTAGT TATTTATAATTGTCAAATTCAGGACTCCCCTTTAATGTTTATTATGAAACCAAATTTGGCATAA GGAGGCTGATTTATGAATTACCAAAGGGTCTTGTGGCATGTTCCCCAATACATGCCCTTAGA AGGAAGAACTATTATTTTTATTTTGGCCCTTTCAGGAGTTGATTATCAATTGGTTCGTTTTCA AGTCACAATTCACGTGGGCAGAACCCGTATTGTGAAGACCTAAACTTTCCTAAATGTTCATAT GGGTAGCAGATTTTGTGGTGATTAGAAACATCAGGTCCTTAAATACGATGAACATGGGATAC AAAGGAATTCTTTATAAGGGCAAGTATCCTAAGTTAGCACATTTACTTTTCTCTCCCCTCCGC CCCCAAAAGAAAATCCTTACAAATAAACTGCAGGTAGGCTTCTAAGCCTAGTCCTGCAGTA TGCTGCTAACATCTTGATGCCAATCTTCACAGCATTCTTTGATTGTCATCTTATTGCTGATACA TTCATACATATTTAGTGCTTGACACTGTAGAATTTTGTTACAGAAGATGGTTACTAGATTTT AAGGGAGCTGAGGGAATAATTGATGAGCCTTGAATTAACCATGCATTTAATTAGATTTTTTGT TGTTGTTGTTGTTTTTGAGATGATGTCTTGCTCTGTTGCCCAGGCTGGAGTGCAGTGGCT CAATCTCGGCTCACTGCAACCTCTGCCTCGCAGGTTTGAGCGATTCTCCTGTCTCAGCCTCC CCAGTAGCTGGGTTTACAGGCGCTTGCCACCACCTGGCTAGATGTTTTATATTAAAGCCA **GAGAANNN** >376

>377 GTCCGGGCTGGGTCTCCGAACCTGAAACCGGGAGCTTCCTGCTCGTGTTCGCTGTT GAGAAGCTACCCGCGGGGTTGTAGACCTCGGACCTCATGGCAGAGATAATTCAGGAACGCA .TAGAAGATCGGCTCCCGGAATTGGAACAGCTGGAGCGCATTGGACTGTTCAGTCATGCGGA GATTAAGGCTATCATTAAGAAGGCTTCCGATCTAGAGTACAAAATCCAGAGAAGAACCCTTTT CAAGGAAGACTTTATCAATTATGTTCAATATGAAATTAATCTTTTGGAGCTGATCCGGAGAAG AAGAACACGCATTGGATATTCATTTAAGAAGGATGAGATTGAGAATTCTATTGTACACCGGGT ACAAGGTGTTTTCCAGCGTGCCTCAGCAAAATGGAAAGACGATGTTCAACTTTGGCTCTCCT ATGTGGCTTTTTGTAAGAAGTGGGCTACTAAAACTCGACTTAGCAAGGTATTCTCTGCCATGT TGGCGATTCATTCCAACAACCAGCTTTGTGGATTATGGCAGCCAAATGGGAAATGGAAGAT CGATTGTCTTCAGAAAGCGCAAGGCAACTATTTCTTCGCGCACTGCGCTTTCATCCAGAGTG AGAAGGAAGAATTTGAAAAAGCCAGTATGGATGTGGAGAATCCTGATTATTCTGAAGAAATC CTTAAGGGCGAGTTGGCATGGATCATCTACAAAAATTCTGTAAGCATAATTAAAGGTGCAGA ATTTCACGTGTCACTGCTTTCGATTGCACAGCTATTTGACTTTGCCAAAGATCTACAAAAAGA GATTTATGATGACCTTCAGGCTCTACACACAGATGATCCTCTCACTTGGGATTATGTGGCAA GGCGAGAATTAGAGATTGAGTCACAGACAGAAGAGCAGCCTACAACGAAACAAGCCAAAGC

TCTGCCAACAGAGGCCATGTGGAAGTGTTACATCACCTTTTGCTTGGAAAGATTTACTAAGA AGTCAAATAGTGGGTTCCTTAGAGGGAAGAGGTTGGAAAGAACCATGACTGTATTCAGGAAG GCACATGAACTGAAGCTTCTGTCAGAATGCCAATACAAGCAGTTGAGTGTTTCGTTGCTGTG TTATAACTTCCTGAGGGAAGCTCTGGAAGTGGCAGTAGCTGGAACTGAATTGTTTAGAGACT CTGGGACAATGTGGCAGCTGAAGCTGCAGGTGCTGATCGAGTCAAAGAGCCCTGACATAGC CATGCTTTTTGAAGAAGCCTTTGTGCACCTGAAACCCCAGGTTTGTCTGCCATTGTGGATTTC CTGGGCAGAGTGGAGTGAAGGTGCCAAAAGCCAAGAAGACACTGAGGCAGTCTTTAAGAAA GCTCTCTTAGCTGTCATAGGTGCCGACTCAGTAACCCTGAAGAATAAGTACCTGGATTGGGC TTATCGAAGTGGTGGCTACAAAAAGGCCAGAGCTGTTTAAAAGTTTACAGGAGAGCCGAC CATTITCAGTTGACTITTTCAGGAAAATGATTCAGTTTGAAAAGGAGCAAGAATCCTGCAATA TGGCGAACATAAGAGAATATTATGAGAGAGCTTTGAGAGAGTTTGGATCCGCAGATTCTGAT CTTTGGATGGATTATATGAAAGAAGAATTGAACCACCCCCTTGGTAGACCTGAGAACTGTGG ACAGATCTACTGGCGAGCGATGAAAATGTTGCAGGGAGAGTCAGCAGAGGCATTTGTAGCT AAACATGCTATGCATCAGACTGGCCATTTATGAAGATGAAGAATACAGTCAGCTTTGTGAAAT AGTATTGCAAGCAAGCCCCGTGGGCAAATTTGTATTGAGTCCATCTGTAATTTGCTCAGTGA TGGCAGACAAGATGGCTGTCTGGTTTTGAGACACACTTTAATTTTATGTTAACTTGTTAAATC NNNNN >378

NNNNNNNNNAAACCAACTTTGTGATTTTTATTGATGGGCGACAACTTTATACTCCT AGATATCACTATACTTTTAAACCAACTTTGTGATTTTTATTGATGGGCGACAACTTTATACTCC TAGATATCACTAAACTGTGTACAATTAGGGACGCAGCATTAGAGAAGAGCAGACAGCAGAAT TAAACAGAGCAGACTGAAGGAGAGATCTTCATTATTTGCCCATTTTTCATTATGTGTACACAG AAGCATGAATGCAATTTGAAATCTTTTAATGGCAATAAAGTTACAATCACCCATCTATGTAGA CTAACATTITAACTCCAAATATTTGATCTGCAATGTGTACGTAAGCAGTTTCTCTCAGTACAAT TATTAAAATTTTTCCTGTTAGGAACCAGCAACTTATTTTTTATGTTTATTTTTTCTTTTGAAGTAA GAACTAGTTCTTCTTTGATAACTGGCTCATTTTTATCATTTATCAAAAACTAAAGGGTAGGGAA GAAAAGTGTGATGATTAAAAAATTTCTTTTTTAAGGAAAGATAAAATTCATTTTCACAAATTT ACAAGTGTTGTTGCTGGTGCAGGATTTATTCTACTAAGCAATGAGACTGGGGATCAAATCCA CTTTCTTATCTCAGGAATCAGCATTATTTCAGAAATATGGGTTTTTGTGTATTTTCTAAAATCA AGCAACAGTCTGTTTCAACCAAATGATTTTGATTTGGAAGTTAGAGTCAACAGAAGCTGTGTT GTGCACGAACCCCAAGGCATCTCCTTTTCATTCTAGCCCATTTTTGCAAAGGGAGAAAGAGT CGGGCACTGGGCGCACACAGGCGCACACAGGGTTTACAGCAGGTCCACTCGGCGGTAAT ACAGGAGGTAGGCTGTGCGTTCAGCAGTTGGTTTCACCACCTGGTACTGGTTGATCACCTT GACTGTCTGGTCATCGATGCGCAGCCAGCCATTCAGACCGATCTGGAAGACGTCTGTAGTG TAATGGCCGCCGTCGCACTGTTGCCGTGATGGTAGACCACTGCAAACAGCCGATAGGTTC GGTGGCATTTAAAATTCTTATTTTTAACCCCTGGAGAAAGCAGTTCTTTACTAATTTCCAAGTC TTTCAGGTGCAGCACGAGGACAGGAGGGAGTTTTTCCAGAGTCACTCTTCGACTTATCTCAA CCTCTTGTTTGGTTTTTGTGGTATAACCTTGGACAGATTCTCTTGCCACCAAGCTCTCCAGTG CATCCTGGACTGTGCGTATCTTGTCTGACTGGATATCCAACTGCAACGTGAAAAATGGCTGC AAAGTGGCAGATTCTTTTGAACTCTGCTGGTAAACCACAGACCTGATGTGTCCACCAAAAAT GCCGGTGATTGGAGTCTGAACAAAATCCGCCTGGCGGGTGACGGAAGTCTTGTTCCGGGG GCCCACTTGTTCCCATTCATCCTCGCTTCCTTCACCTTGTTCTTCCTGCTCTTCTTCATTGAC CGAGTGGTTTTTGGGGCCGTTGGAAATCGTAAGTTCTGAAAAGGAGAGCATCTGCTTACACT >379

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TAGGCAAGACCTTGTGCCCATTAACAGGTCTTAAAGTAACAAGAGCGGCTGGCGGCCGAGG
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## Table 4

TAGGTGTATCTCCATGCATGATTACAGCTGGGTTTCTCTACGTGTTCTTGATGATCTGCAACA
AGACATACATCGACCGGTCCACCGACCCCTTATATTATGGAATCTTTGCTTTTTGTCCAGATG
TCTTTGCTTTTCTTCAGGACACAGTGGCTTTTGACAGTTAATACACCTCACGTCGCAGTAACT
GTTGCTTGCAGTACCTCGGCCGCCACCGCGGGGAGCGCGAATCAGTGGTGCTGCCCCCC
CATTCGGCAGGGAACACCGATGGCCCATGCTTCTGGCCGTCCTTTTACACACAGGAAACAG
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NNNNCCGGCACGGGGGGGGGCACAGTGAGTCCACTGGGGCACGGCAGCGTCT **AAGCCACAAGCCGACTGACATAAGCCAGGTCCTAACGGAGCCTATGTGTAAGTCCACTACT** GGTGCAAGGTTGCACACTTCTAAGAAGAGCGGCGTGGGGGGCTCGGCGACCTTCGCTTCA GTCGCTCCCCGTGCAGTCCCCTGTGCCCAAGACACAGCCTGATGCTTGTGCTCCGGTGG GCGGACTTGGAGGCGCGGGAACTGCAATTGGTGGCTTTGAAGGCGCGGCGAGCGGGAA GAAGGCCTGGGATTTTTTGTCTGAAAATCAACTGCAGACTGTAAATTTCCGACAGAGAAAGG AATCTGTAGTTCAGCACTTGATCCATCTGTGTGAGGAAAAGCGTGCAAGTATCAGTGATGCT GCCCTGTTAGACATCATTTATATGCAATTTCATCAGCACCAGAAAGTTTGGGATGTTTTTCAG ATGAGTAAAGGACCAGGTGAAGATGTTGACCTTTTTGATATGAAACAATTTAAAAATTCGTTC AAGAAAATTCTTCAGAGAGCATTAAAAAATGTGACAGTCAGCTTCAGAGAAACTGAGGAGAA TGCAGTCTGGATTCGAATTGCCTGGGGAACACAGTACAAAGCCAAACCAGTACAAACCTA CCTACGTGGTGTACTACTCCCAGACTCCGTACGCCTTCACGTCCTCCATGCTGAGGCG CAATACACCGCTTCTGGGTCAGGAGTTAGAAGCTACTGGGAAAATCTACCTCCGACAAGAG GAGATCATTTTAGATATTACCGAAATGAAGAAAGCTTGCAATTAGTGAACATGAAAGGAAAAT AAAGAAACCCCGGGGGGGGCCCCAAAGTTAACAGGCCTATAACACCACGGTTTTCTCTCN NNNNN

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GCATGGTGTGTGCCTGTAATCCCAGCCACCTGGGAGGCTGAGGCAGGAGAAT TGCTTGAACCTGGGAGGTGGAGGTTGCAGTGAGCGGAGATCGAGCCATTGCACTCCAGCCT GGGCGATGAGAGCAAAACTCTGTCTCAAAAAAGAAAAAGTAAGAGTGGGGGGGATCATCTA TAATATCTAATTCTACCTTAGAACTTTCCTTTGGTGGTGGGGGTTGGGTTCTGGGAGTTTGACA

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NNNNGTGATATGATAAAACTGCGTCAGAGATTGTCGTGGCTGTCTTTGTATTGTT GTCCGTATGCACGGTGTTTTCGCGGGATGATTTGGTTTGCCTCTGTCTCGGTCAGTTTTA GGGGTGTGCCGATGTCTGAGTAGTTTCCGTGGACACTCGGGCTGGCACACATGGTGTTC ATTTGTTGGTAGAGCTCCGAGGCTTCTCGGGAACCCAGAGCCAGTTGTGTTCCGTTTGGGT CAGTGTGCTAGTGGATCGCCTGGTCAACATATGGTGGAGCTCCCCAGTGTGTGCTTTACGA TTCCCATATTCTGTCCAGAATGTTGGTGTCACCACAGCTCGTGTTATGTTCGCACCTACTCC GGTGGTCTGTAGCCCAGAGTTTCTCCTTGGTACCCCGGAGCAGAGTTTCCATGTGAGACCA AGTTCTGCACGCATGGCAGCTCCAATCCTTGGCCATAAATAGTGTAACTCCAGTTTATATAAA TATAAATAAACGTCAATGGAACACTAAATTGCCTGTCTTAACATTGTACATTCGGGGCCTAGC TGCCCTTGAGGATGTCCTAGTTACACCCTCTCTGATACCTGTGGAGTTTAAGCACCATTCCT CCTCTGTGGCTTTTTGTTTGGGAAAGGGAGTTGGGATTGGAGGATTTAGATTTGAGGTCATG ATGTCAGAGCACACCAGGAACTCCCAAGGCTGTGCCTGAAGATGCCCACGCTGTCAAGTAG GGTGGTGGGGAGACAGCGAGGGCAGTACAGGACACAGGCACTCCTTTGTCTGGTAGAGA GGAGGAGGGAAATGGAGCTATTCCAGGATACAAGGGATGGCACTGAGGGATGCATAAGT CCCCTGCCTCCCTTGTCTCAACATGTTCTCCTCTGCCAGCCCAGTCAGCTTGGGGAGCTAG GTATCAGAAACCTGAAGGATTCAGCCCGCTTTGTCCTACTAGTGTCTATAAGTCTCTGTCCT GAGATCCTGGGGCTCCTCTATTTCTAGAAGGGATGAGGTGCCATCAAAAATAACTTGGCTG GGCTGAGAAGGGAAGCCAGATGTCAGAACATACTAGGCTAGCATGCCTGCTTCTAGCTTTC GGAGGGGTTATGTGCTCTGATCTTTGAAACCAGAGAAGGGAAGAAAGCCTTATGGAGGTC CCTCCCCACCCTAATAGGTTGCTACCCTCAATTGCCATCTGCCCACCAAGGCCCCTGCCC AGTGCTAGGCAGATAGCCAAGTGGTAGGGGTGACATGACTCCACTAAAGCAGCAGCCCAAG GAAGTGAGGGAGGGACAGAGGCTGACCCTCCTCAAAGCCCCTTGTTGTAGTAGACCACTT CAACGCTGGGGTTTTGCTCATGGATCTGAGCTCTCAGCTCTGGTTCCAGGTTGCTTATGTGT ATGGAGCTCTTCTGGGGGAATAGGGCACAGCACAGGGGGGTTGCAAATACCAGGCAGAAG 

TTCTCCAGAGTGTCCATGATCAGTGGTGGGATGGCCATGGCAGGAATCGCCATGCAGATTC TTGAAATCACCACCTGGAAGATTCCCTGCTTGGCTGCAGTCACCGAGTAGCCAAGCCTCTGA TGATGCAGTTGGCAGCTGCCACTGCTGCAAAGGGCACAAATCTGCCGACCAAGGGGGGCA GGTGCTTGGTGAGGGATTTGAGTCCCAGGGCCGTGGCCACAGCTCCAGTGGTGGCACTCA CATAGGCTGTCCCCAGCTGCCTCACAGTGATGGGAGTGTCACCACTGCGGTTGGAGTAGTT AACAATGGCATTGAAGGACTGATTCACCCACTGCCAGAACACCACGGTTGGGGTCTTCCTGT AGAATGTGAGCATGCAGCCAGTGATGGTCATGTTCATGGGCACCTGGGCTGACATGCGGCC AATCAGGACCACCTTCTCCCCTGTGTCCGGATGGAAGGCGGAGTCATACACATACTTGGCC CTCCACAGCTGGTCCTCGGTGATCCCTGGGGTCACCACGCCGGCCCTGTAGTTCTGCACGA TGTTCCGAGAGCTTCCAGCTGTGCCCCGGACAGCAGCAGATTTCGAGGATCAGTAACAGT GAAAAAGTGCCGGGCTCTGCCCAGGAAAGTACTTTGGTCCCAGCGAGGTTCCTGGATGTTG ATGTCTAAAGGCAATTCACCCATTTTGCTTTCCATCGCTCTCTGAAGCTCTCAGAACCGCCTT CCTCTCTGCCTCCGCTGTCGCCGCCGGGCCCTCCCAGCCATCACGCGGACGTCACGCGT GGATTGGCAGAACCCAGCCACCACACAGAGCACGCCTGCAGCAAACTCAGGCTCACGTCC TTCCAGGAGCCCCGGTAGCTGGCTCGGCTCAGAGAAGAGGTGGTTCGAGCCGGAGGGGAA CAAGCCAGACCCAAGCCCTAAATTTGCGGAATGAGCTAGGGCGTCAGAACCAGAACTGGGG TGGGTAAAGAACTCCGCTGCCCGGGACCAGGTAACGCCGGACGCGTGGGTCGAC >394

NNGTCGCCATTGTGACCCGAGAATTTAATATACTTGTGCCCCGCGCGTGTTTTGTTA **ACCGTCCGCCCGAGTGTCCCCTCAATTTCTACCCCTCGCCCCTTAACCCAAAGCTAAATCCA** CCATCTGGTATTCTCCCCTAGAGCACCAGATGACCATCTGAAGCTGGACAAGTGTCTCTAAC GGGACAAACAGCCAACTGACTCTACCCACTTGGTGAGAAGTGATATACTTCAACTATTTTTTT **AATGCTTCTGAAAGTTTCTTGGCCCACAGAGGACTAGGGTGCAATCATTCCCTGTGTTAGTG** AGTTGGGTTTAATGCAGCTTCAAAATTAGGGTAAAGGGACTTGGTGAAATGTTTACATTAAAT ATTTCACTCCTACCCATTCTTCAGGAAAAAAGGTGAGCTCAGCAAGGCTGGATGCCATTAAG AGATATTTACTGTTTTCTTTTCTATAGCTAAAAAAGCAAACTTTACACGAAGAAGCTCTTGAT TAAGGAAATTTCAATAGATTCATATTTATAAAAATTTTAAACATTTGGCACAGCAAAATTTGGAA AAAATGGGGGAAAAAATAGGTCTGGTTGTTCCCCCTTTTTCCACCTGCTGCTGGACAG TGATGAGATGCTCACAGAAGAAAAAGGCCTGGCTTTGTACCAGGCTGGCGACAGGTGCTAC CAGGAGTGGGCTGAGGGGAGAAAAACTATCTCCCACTCTTTTGGCCCAGGCAATGTCAACG ACTTCCACATTCCCTGGCCCACTTCCTGAGCAACCCCAGGTTCGGCTCTGTATAAGGACCCT GCAATCAAAGGAAACAGTTAAACACCAAACAATTTCTTAAAGCCAAAAAATATTTTTCATGGA GTTGAACATTTTTCGAGTGTTTTTTTCAAGTGTAAAAGCAGTGACATTTTGTTCAAACAGAA **GCAGCATCTAGGAATTCTGGCACTTGGGTTCTAGGGGGTTACAGGTATGCATCATGGATTCT** TCTCCCTCGTATTTAAAAAGGCCTCGTGTTTCTATTCCTGAGTTCATACCAACACCTGCTAGC TCTCCCCTCTAGCGGACAGTGGGTGGCCAGCCAGCCTCCCTGGTTAGATTGGGCAATGCCA AGCAGACATCCCTCATTCACCTGCTGGGCTTGCTTTCTGATTCAGAGGTAAGTCGAAGTGCA GAGAAAGAACTTACAAAAGCACAACCACCAAAGGCAGCCTGAACGGGGAGCCCTGTGCAG AATTTGAATCAAACATGGGGGAGGACACCTGCCAAGCAATAGTATGATGGACTCAAGTCATC CAAGCACTGTAGTTTAAAAAGGAAAAAACACCCCCCACCATTAAAAGACAACCTTCAAATGTT **ACTCAGTATATAAAGTTTGCTTAGGCTAAGGTGGAGTCAGAAATGTCTCTAATTGTAGACACC** ATCTCTGTGCCACCCTTCCTCTCATCGGATATGGAGTGATTTCTTCTCTCGCTGCTGCGACG CAGATCTGAGCCACAGTCAGGTACCAATGTACACGACATAGGCACATGTGCAAACACAAAGA AGGTGGGCTGCTTCTTTCTCTCTGCCCCTAGTCCAGGCTCCTTTGCTTCACGTAAGATT **AACACTTTCCCATTCCTCTGAAGTTGCTGGAAGGACATTTCCCAGGAAGAACAATTCCTCA** CTGCCTATAAACTGTAGTCTCATGTGGGATAGTCAATTGAACATGAGAATCAGAACAATCTG CATCCACTTGTACCCCCAGCTACCTCCCATGTTTCCAGGTATCATTGGCTCTTAACTCCCACA

AGCCTGCCTTTTGGCTACCCATCCCAACAATATCAAGAGGGAATGACTAAGTATCAGCTAGA AACTTAGCCATGTCTCAACATTCCTGGATTATCTGAAAAGCTGTCGATGCCCTTTTACAGGTT TATGGTGACAGACCCGTATCATCTTAAAGTATGTTCATAGTTAAGGCTTGACTTAAGAAAATA AGAGAACCAGACATAATGGAAAGACCTCTTCAATAATGTTGTCATGCCTCTCAGTGAACGTG CTCACAGTCACACTTGGTTTGGCTCCCCAAACCCACAATAGAAAAGGAAAAATGAGTATTTT GTTTTCATCTGTTTTGTATTTAAAGGCATTGGGTTACTTCCTCCTGCCCTCTTTTCTTCCCTG AACAAGAGTTTACAACTCCTCATGGCTTCTTAATAGGTGAAGTAGGTGAAAAGTCTGAGAAG CTCACAGCAGGGTTTGCCGTCCCAACTATGCAGCTGAGAGGTCGCCAGCTCCTGTGCCTTC CCAGCCCCACTATAATTGGCAGTATGTTTGTTCATGTTTCCTGAAAACATTTTCTTTAAAAAG GACAAAGAGCAACATCCAAACATTCCCCAAGCCCCACCCCAGTAAGTCTGAGATTATCTTAT TCCTTCCCTGAAATAATTATAAAGAAGCATTTCAGGCAAAATACTTAGTATTAATGGTCTCTTA CATTAATGGCTTTCCACATACAAATACAATAGAAAAGAAGAAGTCTGGAACCTGACTATCAT GGGACCAAAAAGTATCTTGGCCCTTTGGGAGTTTCCTTGTCAGAAAGTATAAGCCTCAACAG AAGTGTGTTCATATCCCACCTAATTTACAACAGAAGATAACCCCATCCCATCCCCAAAACATA AAAATACAAGTCTATGCCCATAGAACN >395

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NAGCGTTACTCTGACAAAGACTTGTTTCTGTTGCATAGCAACTGAAGATAAGTATGC **AGAACTTAGCAAAGATTTTCAAGAGAAAATAATGTAAGGATTACGTAATTCGGGAAATAAAAA** CCTGAAGGGCAATTTCAACTAAGTATGGCGACTACCTGCTCACCATCTTTTGGAGACCGAAG AAGAAATGAATGGTCTGAACAGACTTAGCCCGACAGAGCTGCCCAATAGAGAGGATGCCAA TGTTAAATGACCACAAGAAATGTAACATCTCTTTTTAGGACACCCTAGATAAGAAATCTTCCA ACTGGTCCTTCAGGAGGGTGTCTAAGCAGTCTTGGATGAGCTACATCAACAGGTCTGCAGA CCACAGAGCCAGCAATCAGGGACCACATTCCCCGAGGTACAAAATTTAGAGGTTTCCCCTTT ATCAACAAGAGACCCAGGTGCCAGCATGTTACTACCAGATCCAGTTCTTCTTAGGACAGTGT GGCTCAAAGGGATGAGACCTTCCAGACACTGGTATCTGAGCATCTGTGGCCTGCCCCTGAG TTGTCAAGATAATTTCCTTATCTCTGAAGGAGTCCAGACAGGAATGCTTCCACTGCTGGGTG GGTGCTCGCCCTCTTGCTCCTTAAGCGCCCGGCTCACCCCCTTGCTAGCACAGGGTGTCT TACACAGTTTATGGGACTTTTCTGTGAACTACCTGAGGGCAAGAACCATGTCCCACTCCCTC CTTGCTCCTCAAATATTTTATAGGAAAGCAGTCCACAGTCTCACACAGAGGAAACATGAAGTT TAAGTTCTAGCCCTATGAGGACAACACCTACTTTGATACCAGGCGTCACACTCTACAGCTNT **GTTCAAGCTGAGGAGAGTTCTCTTTCCTTATCTGTGTTCTCCTCAGAACACAGAGTGGGACT** CCTGCCAAGTCACCCTTGACTTACN

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NNNNNNNNNNNGCCGAGGTACGCGGGGAGAGAGAAAAGAACACAGATCTCGCA TGGTTCAGATTTTTCTTTTTAGGTCCAGGAGTAAGATATCATACGAAAATGAAAATTATAAT TCTTCTTGGATTCCTGGGAGCCACATTGTCAGCCCCACTTATCCCACAGCGTCTCATGTCTG CCAGCAATAGCAATGAGTTACTTCTTAATCTTAATAATGGTCAACTTTTGCCACTACAACTTCA GGGCCCACTTAATTCATGGATTCCACCTTTCTCTGGAATTTTACAACAGCAGCAGCAGCTC AAATTCCAGGACTCTCCCAGTTCTCTTTATCAGCTCTAGACCAGTTTGCTGGACTGCTCCCAA TCCCTTACAGCTTCAAACACCGCCTCAGACACCAGGCCCCAGTCACGTGATGCCCTAT GTATTCTCCTTCAAAATGCCTCAAGAGCAAGGACAGATGTTTCAATACTATCCAGTTTACATG ACAGTATGAGGAGCAGATACCATTCTATGCTCAATTTGGATACATTCCACAACTAGCAGAAC CTGCTATATCAGGAGGACAGCAGCAACTAGCTTTTGATCCCCAACTAGGCACAGCTCCTGAA ATTGCTGTGATGTCAACAGGAGAAGAGATACCATATTTACAAAAAGAAGCGATCAACTTTAGA CATGACAGTGCAGGAGTTTTCATGCCCTCAACTTCACCAAAACCCAGCACCAATGTTTT CACTTCTGCTGTAGACCAAACTATTACCCCAGAGCTCCCAGAAGAGAAGAAGACAAGACTGACA GCCTAAGGGAACCATAAGAAGTTGCCCTGATCATTCAGACATTTTGGGAAAAAGATGTGGCC ATGCCTTGGATATAATTTTAGGCTATTAGCTTCCTCAATACTAGTATCAGTTCTTTGGAATACA TGAAATATCTTGACTCTTCTCCTAAATTTGTTTTTACTTATACATGTTATTAAACTCTTTAAATA TGTCATAGAAAATAATACAATCATGTAATGAGTCTTGTCTTACAAAATTATATGTCTCTTCAAA TATCCTATCATTGTATAATATGGAATATAATAACACAGAATAAAGCTAGTATCATTAAATCAAT TGGATAATTGCATTAGTAAATGATGCCTCTGCAAAATGGTAGTACCCATGAAGATATGTATAT TGTCATTGGATGTATGAGTGTTGTGATTGGAACTGATGAAGTAAAATAAGTATCTAGATT TGAAAAAAAAAAAAAA

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#### Table 4

GAGCTGTCACTGATCCTGGCATCATCATCTTGATGTGTGACCCTATCCAAGTTTTGGTTT TCATGGAGTTAAAGGTTATTCCCCTTGCATTTTACAGCCCTGATTTTGCCATTTGCCAACCTCT TTCAACTAAGTTCATGTCATCTTTTCCCATGGAGTTTCACTATGCATTGTCAGACTGCTGGTT AGGCCTCCAGACCAGGTCCATCTTCTCCCTTTTTCTCTAGCATGGCCTTGCCCTTTCCACAG TGCCCAAGCCCCAGGGTTGCCCTTTTGTTATTCTGCTGCCTAGAAGTTAGAACATTCAAGAA TTGAGGGTACACCTATAAACAGACTGGCAGATGATATAGTGCTTAATGTCTTGCCTCAGTTTG TCATTGTGTCAGAACATCCGAAAAAAGATAGGAGAAAAGTTGGAGTTTAGGGCATAATTTTCC ACTTAATCACATGAAGAATTTCAATTAGATATTTCTTCTACGTAGTATAGTTATAACTTTGCATT TTCAAGAACGAGATTAAAAAAGAAAATCTAAAATGGGATGATTCAGAGGAAGTAGAAATAAAC AAGGCTTTACAGAGAAAGTCCAGAGGAGTTTATTGGCACTCTGAGCTACAAAAAGGCTTGGA GAGTGAGCCAACATCAAGAAGGCAATGTAGAAATTCTCCAGGGGAGAGTGAGGAGAAAACC CCATCCCAGGAGAAGATGAGTCACCAGAGTTTTTGTGCCAGGGACAAAGCCTGTACACATAT CCTCTGTGGGAAAAACTGCTCTCAGAGTGTGCACTCTCCCCACAAGCCAGCGCTCAAACTG GAAAAAGTATCTCAATGTCCTGAATGTGGGAAAACCTTTAGCCGAAGTTCTTATCTTGTTCGG GTGAGCGCTCCAACCTCACTGCCCACCTACGAACTCACACAGGGGAGAGGCCCTATCAGTG TGGGCAATGTGGGAAAAGCTTCAACCAGAGTTCCAGCCTCATTGTCCACCAGAGGACCCAT ACCGGGGAAAAGCCTTACCAGTGCATTGTCTGTGGAAAGAGATTCAACAACAGTTCCCAGTT CAGTGCTCACCGGCGCATCCACACTGGGGAGAGCCCATACAAGTGTGCAGTGTGTGGGAA **AATCTTCAACAATAGCTCCCACTTCAGTGCCCACCGAAAAACCCACACTGGTGAAAAGCCTT** ACAGGTGTTCTCACTGTGAGAGAGGCTTCACTAAGAACTCTGCCCTCACCCGTCATCAGACA GTACACATGAAAGCAGTACTCTCATCACAGGAAGGAAGAGATGCGTTATGAGTGTCTCGGTA AACTGTCAGATTAAGTTCCTCAGGTCAGCATGTATGAGCTTTCTTCTGCTGTGGAGAGATCTA GCCAGTCCTGACTTTGCAACAGACCTACTGACTACTGGATCTTAAGACCCATGTCTAGGAC CAGGAGTCAGCATAAGGACGCTGACCTCTCCTGGCTGTGCCTGTGACTCCAGAGTCCTATC TTACTGTGACTTAAAGTTTGATGGAGAGAAAGCTGTAGGATCCATAAATTCTACCAGGAAACC AGGGTCTTCCTGTTCCTAGCACTGAGAATGGGCACCCAGTGGTCCAAGAACACTTTCTGGG CTAACATAGTCCTCACACAGGGCTGAGAAAGAAAGTGTCTCCTTTCCTGGAAAGCACATGTA GCTACCTTCAGGGCAGAAGACACTGCTCTTTGTAACCCAGCCACCAAAAAAGCAAACAGA AAGAAGGAAGGATGGTTAAGCCATTGGATAATACTGAATCTGTTTCCCTAAGTGACTTAACCT TAGAGCAAGCACAACATCCAGGTTAATTTTTTGTAAGATTTCTCCTTTTATTATTGCCCTCATC ATAGTTCCTGATTGTCTCTTAAAGTAAGTGGTTTATAGACATTACTATTTCTGATAATAATTTA CAAACTACTATAAACAAATTTATAAACATTACTAATTTCTGATGAAAATAAAGTTGTTTCTCCCT CCACAAANNNNNNNNNNNNNN

>403 NNACCCACGCGTCCGGATTAATCTATTTGCCTAAATGGGTTTGTTCAGGTATCCATT TTTAACAAAGAAGTTTGTGTTCATATAGTAAAAGACCTATCAGTGTTTCCACCATGCACTTCTA TTTTTTAGGAGTTTATAATTTTAAGTCTTACATTCCTAGTAACATTTGGGCTTTTCTTAGGTATG TTTCTAGTCTTCCCCTCAAATCATGCATGCAAATAGGAGGACAGTGGTGGTGACTCAACTGG ATACAGGTGCTCAATAGTCAGGCTTGATAGTGATGTCAGGACGCATTACAAGCTGTAAGCCG ATACTGACTGGCCATTGGCACCATCCTTGACTAACCTTCCTCTTTTTCTCTAGTGTGCCTATG GTGAAATGGCAATAGCATTCACTGTCGTATTTTGCAGTGCTCAGGAAGTGGGACGTTAACTT TGAAGGTGCTTGTTTGTATTAGCTCTGCTAGGTTTACCTCTACAACGTAGATTTCAGCAGCTA TGCTGACTGACACTACATTCTAGTTCTTAAGATTTTTTTCCAGATCCCCCCTTCCCCAGCTA GACATACGTAGCATACTTTCATCTTATTCAGTCTTTCTGTAACCTGCTGCTGCTTTTAGTCCTC CTCACCTCAGATCGGAATCAATGGAGTGGGCCCAGAGGATACATTTTAATTCCAGTAATGGT AGGTAGATTTGTCCTGCTTTCTAAAACATCTCCTCATTTCATATTTCCACTCCATATTGATTCC ATAAGGGAAAATTAATGGGTGTTTCCTCCTTTAGGGAGGTAATGCAAAGAGTGTGGACATCT TCTAATCTTGAGGAACAGTAGTTGATTTCCCTTGAAGGAGCTTACATATTGACTGTTTTCACA ATAACCTGTTTGCCCCAGTTCAATCCTCATTTTAATACTTAATTTGGTACTGGCTCAAATAGCA TTTTCTTACAGATAACAAATCAAGAGTGAAATTTGAGGTTATACTCCAGTAAAGTTTTTAACAC 

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## Table 4

ATTCCTCTACATGAAGAGCTCCTTAGTCAGCTTCGAGATGTTAGGAAGCCTGATGGCTCGAC TGAACATGTTGGTCCCATCCTCGTGGGCTGGCTCCCTTGCCTCAGCTCCTATGATAGCTACT GCAGCAATCAAGTAGCCGCCAAAGCTCTGCTGGACCACAAAAAGCAAGATCACCGAGTCCA **GGATTTCCTACAGCGATGTTTAGAATCCCCCTTTAGCCGCAAACTAGATCTCTGGAATTTCCT** CGATATTCCAAGAAGCCGCCTGGTAAAATACCCTCTGCTTCTCCGAGAAATCTTGAGGCACA CACCAAATGATAATCCAGATCAGCAGCACTTGGAAGAAGCTATAAATATCATTCAGGGAATT GTGGCAGAAATCAACACCAAGACTGGTGAATCTGAATGCCGCTATTATAAAGAGCGGCTTCT TTACTTGGAAGAAGGCCAGAAAGACTCCCTGATCGACAGCTCTCGAGTCTTGTGTTGTCATG GTGAACTGAAGAACAATCGGGGCGTGAAACTGCATGTTTTCCTGTTCCAAGAAGTGCTTGTG ATCACTCGAGCCGTCACCCACAATGAGCAGCTTTGCTACCAGCTGTACCGTCAGCCAATCC CCGTGAAAGACCTCCTGCTGGAAGACCTCCAGGATGGAGAAGTGAGGCTGGGTGGCTCCC TGCGAGGGGCATTCAGCAACAATGAGAGAATTAAAAACTTCTTCAGAGTCAGTTTCAAAAAAT TAACTGTATTCGTCAAGCCAAAGAAACAGTTTTGTGTGCTGCCGGGCAAGCTGGGGTGCTTG **ACTCCGAGGGATCGTTCCTAAATCCCACCACCGGGAGCAGAGAGCTACAGGGAGAAACAAA** ACTTGAGCAGATGGACCAATCGGACAGTGAGTCAGACTGTAGTATGGACACGAGTGAGGTC AGCCTCGACTGTGAGCGCATGGAACAGACAGACTCTTCCTGTGGAAACAGCAGGCACGGTG AAAGTAACGTCTGACAGAAGCATGTGCACTTCGGGAAGCAGGCCTGCATCTTACCTGTACA GTATTTGCATTCCACAGATGGAACGGTTTGGAGAAGCACTTTTTCATACTTTTGTGAAAGTAT ACATGTTGGCCCAGTCTCTCGTATCTGTACCTTTGTCCCTAGTACTGTAACTGCCAATCTGTC TGTGTAAGCTGGAATCTGTGGCAACTATTACCCTGTGTTGTATTTCCCAAGTGTCTGGATGG **ACTITICCCAGCTCTTAGATGTGGTAGCTAAAGGCACGGAATTTAGACGGCCTTGTAAATAGG** ATGAAGTGAACTTGGTTTGATCTTACTCAACTAGAAAGCTTGAAAACATCCCTGGGGATTCTG AAGGCTTAATTTTGCAAAGGAGGATGCATTGTCTGAACTTTGCAACTTCATCCAGTGCAAGTT TGATGCAAGAATGTATTAGGACATAAAATAGAGGCTGACCTTAAAAGGGCCAGGACAGAAGC GGCTGCCAGCTCTGAATCTTTAACTGAAATGCACATGGCACCAGGAGGTGTCTCTCATAGTT GGTTGCTAGCCTAAAACATCAGAATAGAACCCAAAGGGCTTAGGAAGGCCTGCCAGGATAA CAAGAAGGCCCTGTATTCATTGTGTTTCATCTGCCTAGGCCTACTCATTATTTTAGAGAATGA ATGAAGCAACAAGGAAGAGACCATGACTCTATCGATGACACTGTTTATAGAAACACAGGA GAGGAAGAATTTGGAATGAAAAGCACTTCGTCAGAACCTTCTGTGGGAGCCATTGAGAAAA AGCATGGTCCAGTGCCTTCTGAGAAAGGCCAGAGCTTTGGGCTTTCCTGCTCTTGTGG GTCGTCAATTTGCCATCTCTGGTTCTGTGCTATAATCAGAATTGTAATTATGTTCTCCAGAGG CCAATTTCATTAACTCTGATTAATTAGAATCAGCTAGCCAGATTAGTAACCTCTTTGTCCAGC CTTGATTTACAGTGCAGGGTAAAGTGCAGACCTTAAAAACAGCTAAGTACCTAGAAGAGCTC CCTGCAAGTGTAAATATTAAGGATGACCTGTGCAAAATTATACCCACACCAGCACTAGTGGT CAGTAAATGCATTGATGTCATTTTATTATGTACATATCATGTGCATTCAAGCTGTGTGACAA GATATATCAATATAAAAACAAGGTATATATTTTTTTGAAAACAAGGATATTGTGATCA ATTITACCCTGTAAAACATATTTCTGTATTTATAGGTCTTAAACATGATGAATTTTTTCTATTAC **AAGTTTATTTAAAACTGCTTTCTCAAGTCGTTATTGATACAGCAAGTGAACCTGCTGCAGACA** GGCGCCATCAGCCACTTTTAGAAGCCATCAGCCAGTGTGTTGGGAAAAGAGGTTTGTCAAG **ИИИИИИИИИИИИИИИИИИИИ** 

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## Table 4

NNCACGCGTCCGGCTAATGAATCTTGGGGCCGGTGTCGGGCCGGGCCGGCTTGAT CGGCAACTAGGAAACCCCAGGCGCAGAGGCCAGGAGCGAGGGCAGCGAGGATCAGAGGC CAGGCCTTCCCGGCTGCCGGCGCTCCTCGGAGGTCAGGGCAGATGAGGAACATGACTCTC TGTTCCCAGAGCTTTTCTCTAGAGAAGATTTTGAAGGCGGCTTTTGTGCTGACGGCCACCC ACCATCATCTAAAGAAGATAAACTTGGCAAATGACATGCAGGTTCTTCAAGGCAGAATAATTG CAGAAAATCTTCAAAGGACCCTATCTGCAGATGTTCTGAATACCTCTGAGAATAGAGATTGAT TATTCAACCAGGATACCTAATTCAAGAACTCCAGAAATCAGGAGACGGAGACATTTTGTCAG TTTTGCAACATTGGACCAAATACAATGAAGTATTCTTGCTGTGCTCTGGTTTTTGGCTGTCCTG GGCACAGAATTGCTGGGAAGCCTCTGTTCGACTGTCAGATCCCCGAGGTTCAGAGGACGGA TACAGCAGGAACGAAAAAACATCCGACCCAACATTATTCTTGTGCTTACCGATGATCAAGAT GTGGAGCTGGGGTCCCTGCAAGTCATGAACAAAACGAGAAAAGATTATGGAACATGGGGGGG CCACCTTCATCAATGCCTTTGTGACTACACCCATGTGCTGCCCGTCACGGTCCTCCATGCTC ACCGGGAAGTATGTGCACAATCACAATGTCTACACCAACAACGAGAACTGCTCTTCCCCCTC GTGGCAGGCCATGCATGAGCCTCGGACTTTTGCTGTATATCTTAACAACACTGGCTACAGAA CAGCCTTTTTTGGAAAATACCTCAATGAATATAATGGCAGCTACATCCCCCCTGGGTGGCGA GAATGGCTTGGATTAATCAAGAATTCTCGCTTCTATAATTACACTGTTTGTCGCAATGGCATC AAAGAAAAGCATGGATTTGATTATGCAAAGGACTACTTCACAGACTTAATCACTAACGAGAGC **ATTAATTACTTCAAAATGTCTAAGAGAATGTATCCCCATAGGCCCGTTATGATGGTGATCAGC** CACGCTGCGCCCCACGGCCCCGAGGACTCAGCCCCACAGTTTTCTAAACTGTACCCCAATG CTTCCCAACACATAACTCCTAGTTATAACTATGCACCAAATATGGATAAACACTGGATTATGC AGTACACAGGACCAATGCTGCCCATCCACATGGAATTTACAAACATTCTACAGCGCAAAAGG CTCCAGACTTTGATGTCAGTGGATGATTCTGTGGAGAGGCTGTATAACATGCTCGTGGAGAC GGGGGAGCTGGAGAATACTTACATCATTTACACCGCCGACCATGGTTACCATATTGGGCAGT TTGGACTGGTCAAGGGGAAATCCATGCCATATGACTTTGATATTCGTGTGCCTTTTTTTATTC GTGGTCCAAGTGTAGAACCAGGATCAATAGTCCCACAGATCGTTCTCAACATTGACTTGGCC CCCACGATCCTGGATATTGCTGGGCTCGACACCCTCCTGATGTGGACGGCAAGTCTGTCC GAATATCCAACAGTCAAATCACTTGCCCAAATATGAACGGGTCAAAGAACTATGCCAGCAGG CCAGGTACCAGACAGCCTGTGAACAACCGGGGCAGAAGTGGCAATGCATTGAGGATACATC TGGCAAGCTTCGAATTCACAAGTGTAAAGGACCCAGTGACCTGCTCACAGTCCGGCAGAGC ACGCGGAACCTCTACGCTCGCGGCTTCCATGACAAAGACAAAGAGTGCAGTTGTAGGGAGT CTGGTTACCGTGCCAGCAGAAGCCAAAGAAGAAGAGTCAACGGCAATTCTTGAGAAACCAGGG GACTCCAAAGTACAAGCCCAGATTTGTCCATACTCGGCAGACACGTTCCTTGTCCGTCGAAT TTGAAGGTGAAATATATGACATAAATCTGGAAGAAGAAGAAGAAGTGCAAGTGTTGCAACCA AGAAACATTGCTAAGCGTCATGATGAAGGCCACAAGGGGCCAAGAGATCTCCAGGCTTCCA GTGGTGGCAACAGGGCAGGATGCTGGCAGATAGCAGCAACGCCGTGGGCCCACCTACCA TGTACCAATCGGCCAGAGCGTGGAAGGACCATAAGGCATACATTGACAAAGAGATTGAAGC AGGAATGTAGCTGCAGTAAACAAAGCTATTACAATAAAGAGAAAGGTGTAAAAAAAGCAAGAG AAATTAAAGAGCCATCTCACCCATTCAAGGAGGCTGCTCAGGAAGTAGATAGCAAACTGCA GAAGGGGAAGAGTGCAGCCTGCCTGGCCTCACTTGCTTCACGCATGACAACAACCACTGG CAGACAGCCCCGTTCTGGAACCTGGGATCTTTCTGTGCTTGCACGAGTTCTAACAATAACAC CTACTGGTGTTTGCGTACAGTTAATGAGACGCATAATTTTCTTTTCTGTGAGTTTGCTACTGG CTTTTTGGAGTATTTTGATATGAATACAGATCCTTATCAGCTCACAAATACAGTGCACACGGT AGAACGAGGCATTTTGAATCAGCTACACGTACAACTAATGGAGCTCAGAAGCTGTCAAGGAT ATAAGCAGTGCAACCCAAGACCTAAGAATCTTGATGTTGGAAATAAAGATGGAGGAAGCTAT GACCTACACAGAGGACAGTTATGGGATGGATGGGAAGGTTAATCAGCCCCGTCTCACTGCA 

TGCACTGCTGAAGAGTCACTATGAGCAAAATAAAACAAATAAGACTCAAACTGCTCAAAGTG ACGGGTTCTTGGTTGTCTCTGCTGAGCACGCTGTGTCAATGGAGATGGCCTCTGCTGACTC AGATGAAGACCCAAGGCATAAGGTTGGGAAAACACCTCATTTGACCTTGCCAGCTGACCTTC AAACCCTGCATTTGAACCGACCAACATTAAGTCCAGAGAGTAAACTTGAATGGAATAACGAC ATTCCAGAAGTTAATCATTTGAATTCTGAACACTGGAGAAAAACCGAAAAATGGACGGGGCA TGAAGAGACTAATCATCTGGAAACCGATTTCAGTGGCGATGGCATGACAGAGCTAGAGCTC GGGCCCAGCCCAGGCTGCAGCCCATTCGCAGGCACCCGAAAGAACTTCCCCAGTATGGT GGTCCTGGAAAGGACATTTTTGAAGATCAACTATATCTTCCTGTGCATTCCGATGGAATTTCA GTTCATCAGATGTTCACCATGGCCACCGCAGAACACCGAAGTAATTCCAGCATAGCGGGGA AGATGTTGACCAAGGTGGAGAAGAATCACGAAAAGGAGAAGTCACAGCACCTAGAAGGCAG CGCCTCCTCTCACTCTCTCTGATTAGATGAAACTGTTACCTTACCCTAAACACAGTATTTC TTTTTAACTTTTTTATTTGTAAACTAATAAAGGTAATCACAGCCACCAACATTCCAAGCTACCC TGGGTACCTTTGTGCAGTAGAAGCTAGTGAGCATGTGAGCAAGCGGTGTGCACACGGAGAC TTGGTTTTGATTTTTTGCTTGTTTGTTTTGTAAAACAGTATTATCTTTTGAATATCGT AGGGACATAAGTATATACATGTTATCCAATCAAGATGGCTATAATGGGCTTTCTCAGAGATAA AACTTGACCCCGTGTCAAATTGACATCACACTCTGCATGTCTGCGTAATGAAGGTACGATG CAACTATAACCAGTGCAATATGACACTGACACTATATTAAATTCAATAATACNN >431

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CGGGCAGGTACGCGGGATTTACCGGGCAGTCAAAGATCTATTCCTACATGAGCCCG AACAAATGCTCTGGAATGCGTTTCCCCCTTCAGGAAGAGAACTCAGTTACACATCACGAAGT CAAATGCCAGGGGAAACCATTAGCCGGAATCTACAGGAAACGAGAAGAAAAGAAATGCT GGGAACGCAGTAAGCAGTGGTAACAACGCAGAGTCCCGGGAAGCAGTGGTAACAACGCAG AGTCCCGGGAAGCAGTGGTACCTCGGCC >433

GGGAGTCGACCCACGCGTCCGTCTAGÁTCGCGCCCGGCCTTTGTTTTACCATTTAA
AATAGTATCTAAAAAAATCATTTACTTCTCCGAGCCCTTCTTAGCTÁTGGTGAATGTGATGGAC
TTAAGTGCTTTGAGATCTCTAGTATCAAAGATGTATTTACAAATATGATGAAATAATAGTGACA
TCAATTAAGAGCTCCAAAATATGAAAATCCAACAAATAGAATTTTTAAAGCCTGTTCAAAAGAT
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TTCTGGGAGACTCCCAAGGAGACTTAAGAATGGCAGATGGAGTGGCCAATGTTGAGCACAT
TCTGAAAATTGGATATCTAAATGATAGAGTGGATGAGCTTTTAGAAAAGTACATGGACTCTTA
TGATATTGTTTTAGTACAAGATGAATCATTAGAAGTAGCCAACTCTATTTTACAGAAGATTCTA
TAAACAAGCATTCTTCAAGAAGACCTCTCTTCTGTGGGTGCAATTGAACTGTTCATCCGTTCA
TCTTGCTGAGAGACCTTATTTATAAATANN

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# Table 4

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>444 NNGAGTCGACCCACGCGTCTGTTTTTTTTTTTGCTGATAAGAATTCTTTTATGTTATT CCAATAAAAAATACATTCATACAGAAATATAACAATCTTGCAAAAAACAATTTCAAATAAAATC TTGTAAAACAAAATTTTACAAAAATCTTACAAAGATTCTTTAGATAACAGGGTGCTTCCAAAAA AAAAAAAAAAGAAATTTCACTAATAGAAATTTTTTTTTAATTTCAAGCAAAAAGTTTCTGCTTGA TTGAGGCTCAGTTATCACCTGAACAGAATGTACTTCTTTATGTACGTGCTAATTATGAAAATC ACAGGCATTGACAGGTACGGTACCCAGCCCACCCAGGCAAACAGCTCCGACATGTTTCGT TTGCTTAATGGAATTGTTATGGCTAAGCACATAGAAGGCCAAAAAAAGGAGTTTTCCAAACCCA GCAAATCAAGTGCTTGGATTCTGAACTGCCAAAAGAAACTGCACTTCCCCTCTTAAGTAAAA GTGTGTATATATATAAAGCAAAGAGCCACACCCACAAGCCAGCAGCTGGGGTGAAAATAT CAGCTGTTCCACGCCGTGGGTATTGGCCCATTCGCGGGGGAAATTTACTCCTTGGGGAAAA ACTGGGAGGGATTCTACTTGGCTGGGGGAAAAATTGGGTTTTCTTCTTGGCCTTTAAAAGGT **GTTTCTTTCCAAAAGGTTNCCCGTTGGGGTTAGGCNTACTCTTTGGGGGTTNGGTCCNNNNN** NN >445

NNNNNNNNNCTCACTTAGATTTCAGACCCCAGACAATCCTGAAGTGTCAGAGGCA ATGCAGCAGCAGGAGGCTACAGATGTCCACAACAGAGGAGTCGACTCAGAGGAACCCGAG TTCTTAGGGCATGAGCGAACCCCCTTGCTTTCCCCTTCCCCTGTCCTCCCACCATGTGGCCT AGGACATGGACACAGCTGTGGAAACTGTTCAACAGAGTAGGGTAACTAAAGAACCAGCTTTT **GGGACACAGACCCGAAAGAGGAGTTCTAAGGGCTGGAAAATACCAAGGAACTGGCAGAAAG** AGGAAGCAAACCCATAAAGTTCTATAAACTCCTGTTTATAAATCAAAACACCAAGCCCATAAA **AGTAAAGACGTTGAGAATGAACTATGGGATAGCTCACCACCTAGGTCCCAGACTGACCACTG GGTGGCATATACCGAGCAAAGATTCAAATAGCATCACAAAGGCTTTGAAACAGAATTGATATT** GAACCTTCAACCCACAGAAGACTGACCAGAACTTCTCACTTGAACCCAGCCTGGTAGCATAC ACCCAAGTCAGAGAGCTCTGCCATTAGGACGGCAGAAACCGTCAAGATTCATACTGCTGTT TCTCATAAGGACTCAACAAAAATGAATCTTTAGTGACTTGAACCATAGACTGAAGGAATCCAA AGAATGCAGTCATTTTAGTAAAGTACTATCAGGCTTTGTGCTGATTTCCTGAACAAACTGCAT TATATTATGAATCCTAACGGGCGCCGGGAAGCCCGTCTTGGGTCCTCGCTGCTGCTC CCCGTGGTGGTGGATCCTGGAGTTCTCTCACGCAGGAGCCAGCGCTCTCCTAGAGGGGGT CTCAGATCCTGCGAGGCCAGTTCCTTGGAGGGACATGACTAATGAGTCGATCTTTACTCAAT TTTTATCAGTTTTATATTTATAAGCCTGATTTATGACTGTATATTTAATGTTAATAGTGTGCACA CTTATCTTTAAAACGTGCCTGGTGTCTGAGCNNNN

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gGAGTCGACCCACGCGTCCGGTGGCTTCCTGCGGCGTTtCCACTCTCGCTCTCCTG

GCGTTGCCTGATCGCCCCCATCATGGGTCGCATGCATGCTCCCGGGTGAGCTCGGGGCA TCAAGCCGGATTGCTGGGCGGGGGGGGGGGGAGAGACAGGGAGTGTGGGCAGCGGCCG AGGGGATGATGTTCTGGGCTGCTCTGGCACTAGCCGCCACCTCACCTCGAGACTGCTTCTC TCCCCGGGAAGGGCCTGTCCCAGTCGGCTTTACCCTATCGACGCAGCGTCCCCACTTGGTT GAAGTTGACATCTGACGACGTGAAGGAGCAGATTTACAAACTGGCCAAGAAGGGCCTTACT CCTTCACAGATCGGTGTAATCCTGAGAGATTCACATGGTGTTGCACAAGTACGTTTTGTGAC AGGCAATAAAATTTTAAGAATTCTTAAGTCTAAGGGACTTGCTCCTGATCTTCCTGAAGATCT CTACCATTTAATTAAGAAAGCAGTTGCTGTTCGAAAGCATCTTGAGAGGAACAGAAAGGATA AGGATGCTAAATTCCGTCTGATTCTAATAGAGAGCCGGATTCACCGTTTGGCTCGATATTATA AGACCAAGCGAGTCCTCCCCAATTGGAAATATGAATCATTTTATTGCTTGAGTACACAGA CAAATTTATGCGACCAGGGCAGAGGCTGTAGATGATTCACTGAAAAAAGAAAAAAAGGGGAAA GAAAGAAAATCAggAtTAATACTAGTCCCTCCACATTCATTAACAGAATCTCCCCACTAATGGT GCTATTCTCAAACAGTTAATAAATCCAAACTATATAAAGTGCACCAAACTTCTGAATGCCTGA TGGCCAACATAAGGAAAAACATTTCTGGTGGAAACTGCGAATGTCTGGCAACCAATCATCata gTGAGCAATTCATGTGAAAATTAATTCAAACTCCTGGGAGtaaagGTATGAAAGGAAAATCTAC CTACTATCTAAAAGAGAGTCAAAGGGCTTATTCATGGTCTAAATCTGGGGTCTGCAACTATG GCCCTCTGCTTGTCTTTATTAAAGACAAGCAGCCACACCCATTCGATTATGTATTGCCTGTGG CTGCTTTCCCACTACCAGGCCAGAGCTCAAAGAGCAGTTAACAAAATAGCCCCCAAGGCTG AACATATTTACTACTAGCCCCCAAGGCTGAACATATTTACTACTAGGACTTTTACTACTGGCT GACTCGCTTGGTCTTATAATATCGAGCCAAACGGTGAATCCGGCtCTCTATTAGAATCAGACG GAATTTAGCATCCTTATCCTAAAAATAAAATTTGGTGCAATTCAAGAAAACCACCCAAAATGA CCTAACATTATCAAACATTAATAAGAGAATGTAGAGCTACCATGCACTTTCTATAATGAAAATC TCTTTGGATAGAATTTGAACTTCAAAGCAGCACTACACTGGTTTGTGTACTAAGCCTTGGATA ATTCAAACCAGATGCATTACATTTTACCGAAAAAATTTAGTACAAGCAGTCCTACTTAGCACC AGGTTTTATTTATTAGCTTACCTTTCTGTTCCTCTCAAGATGCTTTCGAACAGCAACTGCTTTC tTAATTAAtTCTAGAagtACtctcgaggggggc >448

TTTTCTAACAAATCTTTGCCTGCCCAAAAGTCTCAAAAACATTCTCACGTTTCTAGATTTTTAG CTTTAGCTTTTGTGTTTGGGACTATGATCCATATTTAGTGAATTTTATTTTTTGGGGGGGCAGA GTCCATGTTGCCCAAACTGGTCTGGAACCACCACACCCAGCTAATTTTTGTGAATTGCGGGT ACCAGCACACCGCCCCTCCTGGACTGCGCCTTCTACGATCCAACGCATGCCTGGAGTG GAGGACTAGATCATCAATTGAAAATGCATGATTTGAACACTGATCAAGAAAATCTTGTTGGGA CCCATGATGCCCCTATCAGATGTGTTGAATACTGTCCAGAAGTGAATATGATGGTCACTGGA AGTTGGGATCAGACAGTTAAACTGTGGGATCCCAGAACTCCTTGTAATGCTGGGACCTTCTC TCAGCCTGAAAAGGTATATACCCTCTCAGTGTCTGGAGACCGGCTGATTGTGGGAACAGCA GGCCGCAGAGTGTTGGTGTGGGACTTACGGAACATGGGTTACGTGCAGCAGCGCAGGGAG TCCAGCCTGAAATACCAGACTCGCTGCATACGAGCGTTTCCAAACAAGCAGGGTTATGTATT AAGCTCTATTGAAGGCGAGTGGCAGTGAGTATTGGACCCAAGCCCTGAGGTACAGAAGAAG TATGCCTTCAAATGTCACAGACTAAAAGAAAATAATATGAGCAGATTTACCCAGTCATGGCAT TTCTTTCACAATATCCACAATACATTTGCCACAGGTGGTTCTGATGGCTTGTAAATATTGGG **ATCCATTTAACAAAGCGACTGTGCACTTGCATCGGGTACCCAGAGCATCGATACTTGCCTT** CAGCATGATGGATACGCTTGGACAAGCGCTCATTGTTGACGGTGGACCAAAACTCCGGAAT GGTTTCACTCCGCAGGGCGTGGGAACAACCAGGCACGATTAGACAATCGCAACAGGCGCG GCGATAAACACAGACCCAGGGGGTTCATTAAACCGCATTTAGACCGCGAGCAGGGGTCTCA ACCCGCGGGGGGAGGCAGCACCCACTTGGTAATGAGCACAGNNN

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GCGTCCGATCGCTTTAAAAAGCCGGGCTCTAAAACTTCCAGAATATCTTTCCACCAT CAGCCACTCTGCGTCTTTCCAACATTCCCCCTTCTGTTACAGTGGATGATCTGAAGAACCTTT TCATAGAAGCTGGATGTTCAGTGAAGGCTTTTAAATTCTTTCAGAAAGATCGCAAAATGGCG CTCATTCAATTGGGATCTGTGGAAGAAGCAATTCAGGCCCTCATTGAGCTTCATAACCATGA CCTTGGAGAAAATCACCACCTCAGAGTTTCCTTCTCAAAATCTACAATCTGACTTTTCTGTGA 731

### Table 4

ATTTTTCTCCTAAAACTGGACCATAATTTCAGTAAAACCTTCAGACATAGACTGAAGCAGCTC AAGACCAATTTTGCCTCTTTCACAAAAATAACTCTTTCTGAGTTTGATATTCAAGTATATTTTAA AAATCAAGGGATTTTTTTTTTTGTATTCCCCCTGCCCCGCCAGTCAAAGGTTTCTTTTCCCT CAATAATCTTATTCCCTATATTAAATTAGATTTGAAGAGGATTAACGTTGTTTTAGTTTGGGTC CAGATCAGCCTTATACAACATTTCTAAACTCATTTGTACTTTTAAAAAAATTTAAACACAGACTT CTAAAATTACTTGATGTAAGTAATTTAAATCACTTATGACCAAGTTATTAACCTTATGAATCAG AAGTCTGACCCTTGTAGGAAATTATATTCACATATAAAGTACATCAGATCTTTGCCATATATTG ATGGTTATTATGCATAAACACATTGAGTTGTGTTGGAAGCAGATTTATAAACCTGCATGTTTT CTTTGAATGATTTCTTTTTTCACTGTAAGACACTCCTTTAAATAATGCCTATCTTTAACTTTTT AAGACTATTTGGAAAAATGCAGTGTCTCAGCTGTCCCCAGGGAAATTAAGTGGAATTCAACT AAGATCTGTTAATAAGATGTCAGAATAACTAATAATTTTATTAGGAAAAAAACATCATGTTTTAAATT TCAAAATGACACTTATTTGTCAAGTAATATGATCTTGGAAAATTTTAAAGAAAAATAATCCTAC TTATAAACTACTTTTTTATAATTGTTTTCAGAAAAAAAGTTTACAGTCTTAAGGAAAATATTCAG GTCTATCATATGGTTTGACAGATTTTTTAAAAGTTATTTTTGGTAAGGTCTTCTTTTAGAAAAA TTACTTAATTTCTTATTATGTGCCTTATTATGTGCTTAAGATACAATAGGTTAGAGTTTAATCTA AATATCTTGAAAGCTATATTGTGGGCTTGGTAAGCATTTTGTTTTTTCTTCTCTGTTTTGGTA AGGATTTAAAATTTTTTTCATTGCAATTTTAAGTGGTTTTCAATAAGTAATAGTTTTTATCAAAT TTTTGGTGCTTGGTGCAGAGACGGTGTGGGGAAGGGTGAATGGTTTTGGGAATAATTCAGT GCACACCTGTAGGCCTCTTTACATTGTGACTGATAGGGGTTATTGCATATCAATTTGGGGCT. GTAGAGTGCAATCTCAGTTTCATCTTTTTCACCCATCAGAATTTGTCTCAGGATTACTTGGTTT TTCTCAGTCCTCAAGCGAGAACTTGCTTTTCTTTGTTAATGTGACTTTCATTACTGAGTACCC ACGTATTTGGAGTATGAGAAGGTGGGTTATTTCTCATACTCTGTCCCTCTTTTTCATTGAA TGTAAGAGTACATTTTAATGTTGCTTCAGTGATTGTATAATGTAAAATTGTTCTTTTTAATAAGA **AACTITGCTATTATTCTTTCACTGGTTGGCAAAATGTAAAGCGAAATAGGACAGGTCATTATG** GTTCCCCTTAACTTTACAATTTATCCACTGTCTCCTACTTAGAACAAAGACAATAGACGGGAA **GGGGCACTCACCATACACACATAGACGGAACAGAN** >452

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TTCTCTGACAGGTTTATTAGCTTTCATGTTAATGGATGTTTTTAAACCCTGCAACCCT CTGTCAACTTCTTTCCACATCAAGAGGCCATGAGATACAGTAATGGCCTCTTAAGAGTCATG CCACATAAAGATGATGACTTTGATGTCCTGGCCTGCCTCCTGTAACAATGTGAGGCTGTTTT GGGTACATGCTGTAATAACAACAGGACTATCACAGGAACAATGAAGCAGAGAAGCAGAAGG TGCCTACAAAGTTTTACCTAAATGTCTTGTTTGTCAGGATGGAGCTGATGCGCCCATACTGG CAGAACAATTAGCACAGAGTAGTTCTGAAAAGGAGGAAGAATTCACAAAGCATCAGTTATGG GTGCAGGGAAGTCGCCATCTGCccaATGGGCACCAGAGTGTCACTGTACTGGAAGGGGAAA AGGAGTGGGCTGGATGAGATCCAGGGGCCTCTCTGCCCATGTTCAAAGTCAGTAGCTGCTC AAAGTAAAAACAATTGATGTAGGAATAAGGGGAATGGATAAAGAATGGTACATGCTTATTCTA AAGCAGGAGAGCCTACAGATTGTTGTCAAAGCTCATGTCTATCTCTGTCCTCGAGGcctCCAC ACCATCTCCCTCCCCCCCAGAATCCAAGGGATGAGCCCGTTTCCCTTTATGAGACGAG GTGGAGCAGTACCTCTAGTTTTTGGCTGCTCATGGCCTCAGAGTTGCTGTTTGGAAAGGAAA AAGAGCAGCAGAGGCAAAGAAAAGTACTAGGGCAGCACCTTTAGGTTAGAAATAGATT CCACAGTTAAAAGCACAAGTATAATATGCATTAAACAGAGAAGGGCCTCAATAGAATGGTCA CAATATGCAAGTGTGTCCCACTCATTTACAATATTAGGATTCCAGGAGCTGCCAGAAATAAGT CATCTCATTAACATACCTACCTGCAGTTCTGATGTCTGGCTATTAGTAAACAAGGCCTACGTT CCCAGGCAGAGAAAAGGTTTGAGATGGAAGCGTTCTTGTTAGCAGTCCCTTCCTGCATAAAT GGGGTTGGAGAGAGAGAGAGAGGGAATGGCCAAGGGTATGGAAAGCTTTCACAATGCAT GCCGAGTGTGAAGTGACACCCCCAGCAGATGGGGTTTATCATCTTTACTTAGTCACAACA TCAAGGACTGGTTAGTTCCAGGGAAGGGCTCCATTTCATTACCTGGGTCAGTTCTCTTCCCC TAAAACCCAAACCCTTTGGCAAGCCAGCCGGTGCCTATTCTCCTGGGGCATTTTTAGTGGAA CTTCGGCTGGGCCTTGCCCTCCCCAATATCAGTGAGGAAAGTGGCAGCGGGACAGGTTT GGTCATCTGCAGTGGAGTAGAAAGAGGAACCAAACACGATTCGGGCCACAGGTGGATTCTG GCACATTTTTAGATTGGATTGGTTAAAAATGTCATGTTGTACACAGGATGCAGGCAAAGGAG TTTTTTTTTGAGGGACATAATGCCTATAGGCAGCATGAACGGTCCGATCTACCCTTGGGGA GGAGCTCCCTGTGTAGGGACGGAGAAACTAGGGGGCCTCGAGGAAGGTGTTGGTTCGGAA GATGGAGGAGACAATCTTTCCGGTGGCATTGATGGTGCCTTCGCTGTCTGAGCTGGACTCG GAGGGCAGTGGATGGAGGGCCACTCAGGGAGGTGTTTCCGAGAGACTTGCAGGATGAG GGCTCTTGATTCTTGTCATCTGGCTCAGGGTCCGGTTTCAGTCTTTTCACACTGTTGCCACT CTCTGAGCTCTTATGCTTCACAGCTCCTGCCAACAGCTTCGCCTGGGAGAACTTGTTCTTGG CTTCTTGAGGTTATTTCTGTATTCCTTCAGTTCTTTCAGTTCTTCTTCTCTTCGTTGCTTTTCTA TTAGTTCCTGCTGTCGAGAAACCTCATCAAGGAAGTTGGTCTCATCTTCATCTAAGCCTCTTA

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## Table 4

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NNCACGCGTCCGGCTAATGAATCTTGGGGCCGGTGTCGGGCCGGGGCGGCTTGAT CGGCAACTAGGAAACCCCAGGCGCAGAGGCCAGGAGCGAGGGCAGCGAGGATCAGAGGC CAGGCCTTCCCGGCTGCCGGCGCTCCTCGGAGGTCAGGGCAGATGAGGAACATGACTCTC TGTTCCCAGAGCTTTTTCTCTAGAGAAGATTTTGAAGGCGGCTTTTGTGCTGACGGCCACCC ACCATCATCTAAAGAAGATAAACTTGGCAAATGACATGCAGGTTCTTCAAGGCAGAATAATTG CAGAAAATCTTCAAAGGACCCTATCTGCAGATGTTCTGAATACCTCTGAGAATAGAGATTGAT TATTCAACCAGGATACCTAATTCAAGAACTCCAGAAATCAGGAGACGGAGACATTTTGTCAG TTTTGCAACATTGGACCAAATACAATGAAGTATTCTTGCTGTGCTCTGGTTTTGGCTGTCCTG GGCACAGAATTGCTGGGAAGCCTCTGTTCGACTGTCAGATCCCCGAGGTTCAGAGGACGGA TACAGCAGGAACGAAAAAACATCCGACCCAACATTATTCTTGTGCTTACCGATGATCAAGAT GTGGAGCTGGGGTCCCTGCAAGTCATGAACAAAACGAGAAAGATTATGGAACATGGGGGGG CCACCTTCATCAATGCCTTTGTGACTACACCCATGTGCTGCCCGTCACGGTCCTCCATGCTC ACCGGGAAGTATGTGCACAATCACAATGTCTACACCAACAACGAGAACTGCTCTTCCCCCTC GTGGCAGGCCATGCATGAGCCTCGGACTTTTGCTGTATATCTTAACAACACTGGCTACAGAA CAGCCTTTTTTGGAAAATACCTCAATGAATATAATGGCAGCTACATCCCCCCTGGGTGGCGA GAATGGCTTGGATTAATCAAGAATTCTCGCTTCTATAATTACACTGTTTGTCGCAATGGCATC **AAAGAAAAGCATGGATTTGATTATGCAAAGGACTACTTCACAGACTTAATCACTAACGAGAGC** ATTAATTACTTCAAAATGTCTAAGAGAATGTATCCCCATAGGCCCGTTATGATGGTGATCAGC CACGCTGCGCCCCACGGCCCCGAGGACTCAGCCCCACAGTTTTCTAAACTGTACCCCAATG CTTCCCAACACATAACTCCTAGTTATAACTATGCACCAAATATGGATAAACACTGGATTATGC AGTACACAGGACCAATGCTGCCCATCCACATGGAATTTACAAACATTCTACAGCGCAAAAGG CTCCAGACTTTGATGTCAGTGGATGATTCTGTGGAGAGGCTGTATAACATGCTCGTGGAGAC GGGGGAGCTGGAGAATACTTACATCATTTACACCGCCGACCATGGTTACCATATTGGGCAGT TTGGACTGGTCAAGGGGAAATCCATGCCATATGACTTTGATATTCGTGTGCCTTTTTTTATTC GTGGTCCAAGTGTAGAACCAGGATCAATAGTCCCACAGATCGTTCTCAACATTGACTTGGCC CCCACGATCCTGGATATTGCTGGGCTCGACACCCTCCTGATGTGGACGGCAAGTCTGTCC GAATATCCAACAGTCAAATCACTTGCCCAAATATGAACGGGTCAAAGAACTATGCCAGCAGG CCAGGTACCAGACAGCCTGTGAACAACCGGGGCAGAAGTGGCAATGCATTGAGGATACATC TGGCAAGCTTCGAATTCACAAGTGTAAAGGACCCAGTGACCTGCTCACAGTCCGGCAGAGC **ACGCGGAACCTCTACGCTCGCGGCTTCCATGACAAAGACAAAGAGTGCAGTTGTAGGGAGT** CTGGTTACCGTGCCAGCAGAAGCCAAAGAAGAAGAGTCAACGGCAATTCTTGAGAAACCAGGG GACTCCAAAGTACAAGCCCAGATTTGTCCATACTCGGCAGACACGTTCCTTGTCCGTCGAAT TTGAAGGTGAAATATATGACATAAATCTGGAAGAAGAAGAAGAATTGCAAGTGTTGCAACCA AGAAACATTGCTAAGCGTCATGATGAAGGCCACAAGGGGCCAAGAGATCTCCAGGCTTCCA GTGGTGGCAACAGGGCAGGATGCTGGCAGATAGCAGCAACGCCGTGGGCCCACCTACCA TGTACCAATCGGCCAGAGCGTGGAAGGACCATAAGGCATACATTGACAAAGAGATTGAAGC AGGAATGTAGCTGCAGTAAACAAAGCTATTACAATAAAGAGAAAAGGTGTAAAAAAAGCAAGAG **AAATTAAAGAGCCATCTCACCCATTCAAGGAGGCTGCTCAGGAAGTAGATAGCAAACTGCA** GAAGGGGAAGAGTGCAGCCTGCCTGGCCTCACTTGCTTCACGCATGACAACAACCACTGG

CAGACAGCCCCGTTCTGGAACCTGGGATCTTTCTGTGCTTGCACGAGTTCTAACAATAACAC CTACTGGTGTTTGCGTACAGTTAATGAGACGCATAATTTTCTTTTCTGTGAGTTTGCTACTGG CTTTTTGGAGTATTTTGATATGAATACAGATCCTTATCAGCTCACAAATACAGTGCACACGGT AGAACGAGGCATTTTGAATCAGCTACACGTACAACTAATGGAGCTCAGAAGCTGTCAAGGAT ATAAGCAGTGCAACCCAAGACCTAAGAATCTTGATGTTGGAAATAAAGATGGAGGAAGCTAT GACCTACACAGAGGACAGTTATGGGATGGATGGGAAGGTTAATCAGCCCCGTCTCACTGCA TGCACTGCTGAAGAGTCACTATGAGCAAAATAAAACAAATAAGACTCAAACTGCTCAAAGTG ACGGGTTCTTGGTTGTCTCTGCTGAGCACGCTGTGTCAATGGAGATGGCCTCTGCTGACTC AGATGAAGACCCAAGGCATAAGGTTGGGAAAACACCTCATTTGACCTTGCCAGCTGACCTTC AAACCCTGCATTTGAACCGACCAACATTAAGTCCAGAGAGTAAACTTGAATGGAATAACGAC ATTCCAGAAGTTAATCATTTGAATTCTGAACACTGGAGAAAAACCGAAAAATGGACGGGGCA TGAAGAGACTAATCATCTGGAAACCGATTTCAGTGGCGATGGCATGACAGAGCTAGAGCTC GGGCCCAGCCCCAGGCTGCAGCCCATTCGCAGGCACCCGAAAGAACTTCCCCAGTATGGT GGTCCTGGAAAGGACATTTTTGAAGATCAACTATATCTTCCTGTGCATTCCGATGGAATTTCA **GTTCATCAGATGTTCACCATGGCCACCGCAGAACACCGAAGTAATTCCAGCATAGCGGGGA** AGATGTTGACCAAGGTGGAGAAGAATCACGAAAAGGAGAAGTCACAGCACCTAGAAGGCAG CGCCTCCTCTCACTCTCCTCTGATTAGATGAAACTGTTACCTTACCCTAAACACAGTATTTC TTTTTAACTTTTTATTTGTAAACTAATAAAGGTAATCACAGCCACCAACATTCCAAGCTACCC TGGGTACCTTTGTGCAGTAGAAGCTAGTGAGCATGTGAGCAAGCGGTGTGCACACGGAGAC TTGGTTTTGATTTTTTGCTTGTTTGTTTTGTTTTGTACTAAAACAGTATTATCTTTTGAATATCGT AGGGACATAAGTATATACATGTTATCCAATCAAGATGGCTATAATGGGCTTTCTCAGAGATAA **AACTTGACCCCGTGTCAAATTGACATCACACTCTGCATGTCTGCGTAATGAAGGTACGATG** CAACTATAACCAGTGCAATATGACACTGACACTATATTAAATTCAATAATACNN >459

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## Table 4

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>470 NCTGGGCTCAAAGCAGCCACTCATTATACCATCACCATCCGCGGGGTCACTCAGGA CTTCAGCACACCCCTCTCTCTGTTGAAGTCTTGACATGAGGATCTCCCACAGCTGGGAGAT TTAGCCGTGTCTGAGGTTGGCTGGGATGGCCTCAGACTGAACTGGACCGCAGCTGACAATG CCTATGAGCACTTTGTCATTCAGGTGCAGGAGGTCAACAAAGTGGAGGCAGCCCAGAACCT CACGTTGCCTGGCAGCCTCAGGGCTGTGGACATCCCGGGCCTCGAGGCTGCCACGCCTTA TAGAGTCTCCATCTATGGGGTGATCCGGGGCTATAGAACACCAGTACTCTCTGCTGAGGCC TCCACAGCCAAAGAACCTGAAATTGGAAACTTAAATGTTTCTGACATAACTCCCGAGAGCTTC **AATCTCTCCTGGATGGCTACCGATGGGATCTTCGAGACCTTTACCATTGAAATTATTGATTCC** AGGGCTACCCCTAGTACTGATTTTATTGTCTACCTCTCTGGACTTGCTCCCAGCATCCGGA CCAAAACCATCAGTGCCACAGCCACGACAGAAGCCGAACCGGAAGTTGACAACCTTCTGGT TTCAGATGCCACCCCAGACGGTTTCCGTCTGTCCTGGACAGCTGATGAAGGGGTCTTCGAC **AATTITGTTCTCAAAATCAGAGATACCAAAAAGCAGTCTGAGCCACTGGAAATAACCCTACTT** GCCCCGAACGTACCAGGGACTTAACAGGTCTCAGAGAGGCTACTGAATACGAAATTGAAC GGGCTCCCCAAAGGAAGTCATTTTCTCAGACATCACTGAAAATTCGGCTACTGTCAGCTGGA GGGCACCCACAGCCCAAGTGGAGAGCTTCCGGATTACCTATGTGCCCATTACAGGAGGTAC ACCCTCCATGGTAACTGTGGACGGAACCAAGACTCAGACCAGGCTGGTGAAACTCATACCT GGCGTGGAGTACCTTGTCAGCATCATCGCCATGAAGGGCTTTGAGGAAAGTGAACCTGTCN >471

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>473

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TTTTGAGGTGGATGTCGTTGTTCTGGATCAAGAACGACTGTACAATGAACTGAAACGGG ACCTCCCCACTTTGTACGCACTGTGCTGCTCCCTAAATCTGGGGGGTGTGGTGGAGCGCTC CAAGGACTTCCGGCGGGAATGTAGGGATGAGCGTATCCGTGAGTATTTTTATGGATTCCGA GGCTGTTTCTATCCCCATGCCTTCAATGTCAAATTTTCAGATGTGAAAATCTACAAAGTTGGG GCACCCACCATCCCAGACTCCTGTTTACCTTTGGGCATGTCTCAAGAGGATAATCAGCTCAA GCTAGTACCTGTCACTCCTGGGCGAGATATGGTGCACCACCTACTGAGTGTTAGCACTGCC GAGGGTACAGAGGAGAACCTGTCCGAGACAAGTGTAGCTGGCTTCATTGTGGTGACCAGTG TGGACCTGGAGCATCAGGTGTTTACTGTTCTGTCTCCAGCCCCTCGCCCACTGCCTAAGAAC TTCCTTCTCATCATGGATATCCGGTTCATGGATCTGAAGTAGAGATCAGCAGGAAGCCTTGC TGCCTGGGACATAGAGATCATCTGGCCACCCCTAGAGGCAGATGGGCTGAGATAAAAGACT GTTGGGGCCACCTGACCAGTAAACTGTGGACTAGTAGAAAGTTCATATTCTACCTCTAAAAA CAGGTAGTGGTAACCTGACTCTTCTAATCTTGAACCAAAAGGAAAACCATGAGACTGTAATT GGTTTCTTAGACCACCTAAGATGCCACTTTGAATTCTCTAAGACCCTGGAGAATTGCATTTCT TTCACTGTGCTACTATGTGGTTTTTAAAAAATCAATGCTTTATATTCCATATGTGGTTCTTACC CATTTATCTAGGATGAAAGTGTGAATTAGAGGGGACTCCTTCCAATAAAGTTCAAACTTAAAAA **GGACGCGTGGGTCGACNN** 

>478 >479

NNNNGGCGTTGTAAACTAATGTGGGCCCCTGGAAAAACTTTTTCCCCGGAAGGTTT GAAAAGAGGCCACTTTTTTTTTTTTTTTTTTTTTGAGACAGTCTCACTCTATTGCTGAGGCTG GAGTGCAGTGGCGCGATCTTGGCTCACTGCAACCTCTGCCGCCTGGGTTTAAGCGATTCTC CTGCCTCAACCTCCCGAGTAGCTGGGATTACAGGCGCATGCCATCAAGCCCAGCTAATTTTT TGTTATCTTACTAGAGACGGGGTTTCACCATCTTGGCTAGGCTGGTCTTGAACTCCTGACC TCATGATCCACCCACATTGGCCTCCCAAAGTGCTGGGATTACAGGTGTGAGCCACCGCGCC CGGCCAGCATAGTATTTTATTTATAACGTGAAAAAAATGAAAACAGATACTTCACTACAAATA TTGAACCCAAGTTAGAAAATTTTTATGCAGCCAAACCATGACTTTAAGCTCTATTTACACTGAT AGCCTTCCTTGCTCACAAGGCTTCAGAGCAAGCGCACGGTCTTCCCAGTCACTGTCAGGAA ATCATCATCTGCCAGGGCACGCAGTGCTTCTTCAAACATATCTTTAGTAATTGCTATGTCAGA TTGTCCCCGAATATCTTCAAAAAGTTGCTGGTATTTTAGAGCTGGTGTTTTGCCCTTAGATAA AATAAGCTTTTTCAATGCTTCAGCTAATTCTTCTTTCCGTTTACGAGAGGTGGCACTCATCCC CGTAGTAAGAATAGATATGTCCACGATGCCAGTCCGGGGATCAGTTGCAGACTGCTTCAGA GCTTCCCGATGGAGGCGTTTGGCCTCTTCCACATCAATGGCTTCAACTTTGTTAGACAATCT TACTTTAGCATGGGCTTCTGCTAAGCGGATTAATGACTCTAGCTGTCGAGGGTATGCAGAAA AAGCAAAAGCAAACCTCCTTGGTGACAACTTTAGTTTTGTGGGTGAATTTTGAACACTTAGGC TTCCATTAAGTAAACGGAACTCAGATATGGTCCTGGGCCCCGGAGCTCATCAAGTGGTAN >480

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#### Table 4

AGTTCAAGAAATTGATTGTATTGCCCTTAAAACTATCTACTCAAACACTGTTCTGGCATGTGA ATAAAGTGATTTTTGTTTGTACCCGCCCGGGCGGCCGCTNNN >481

>482 NNNNNNNNNNNNNNAACTCCTAGCGGACACCTCGTGGAGTCCGGCCGGAAGAGC AACCGAGATGAAGGTGAAGATGCTGAGCCGGAATCCGGACAATTATGTCCGCGAAACCAAG GGCTATGGAGACGAGGAAGAGCCATTACATACAATATTAGGAAAGACAGTGTATACTGGGAT TGATCATCACTGGAAAGAAGCTGTTTTTGCCACATGTGGACAGCAAGTAGACATTTGGGATG AACAAAGAACTAATCCTATATGTTCAATGACCTGGGGATTTGACAGTATAAGTAGTGTTAAAT TTAACCCAATTGAGACATTTCTCTTGGGAAGTTGTGCATCTGACAGGAATATAGTACTGTACG ATATGAGGCAAGCTACTCCTTTGAAAAAGGTTATCTTAGATATGAGAACAAATACAATCTGTT GGAACCCTATGGAAGCTTTCATTTTTACAGCAGCAAATGAAGATAATAACTTATATACTTTTGA TATGCGTGCACTGGACACTCCTGTAATGGTCCATATGGATCATGTATCTGCAGTGCTTGATG TGGATTACTCTCCCACTGGGAAGGAGTTTGTGTCTGCTAGTTTCGGTAAATCTATTCGAATCT TTCCTGTAGACAAAAGTCGAAGCAGGGAGGTATATCATACAAAGAGAATGCAACATGTTATC TGTGTAAAATGGACTTCTGACAGCAAGTATATTATGTGGCACTGAGAGATCCCCTCATAATTT CCCCAAAGCGTAACCATGTGTGAATAAATTTTGAGCTAGTAGGGTTGCAGCCACGAGTAAGT CTTCCCTTGTTATTGTGTAGCCAGAATGCCGCAAAACTTCCATGCCTAAGCGAACTGTTGAG AGTACGTTTCGATTTCTGACTGTTTAGCCTGGAAGTGCTTGTCCCAACCTTGTTTCTGAGCA TGAACGCCCGCAAGCCAACATGTTAGTTGAAGCATCAGGGCGATTAGCAGCATGATATCAAA ACGCTCTGAGCTGCTCGTTCGGCTATGGCGTAGGCCTAGTCCGTAGGCAGGACTTTTCAAG TCTCGGAAGGTTTCTTCAATCTGCATTCGCTTCGAATAGATATTAACAAGTTGTTTGGGTGTT CGAATTTCAACAGGTAAGTTAGTTGCTAGAACCCATGGCTCCTTTGCCGACGCTGAGTAGAT TTTAGGTGACGGGTGGTGACAATGAGTCCGTGTCGAGCGCTGATTTTTTCGGCCTTTAGAGC GAGATTTATACAATAGAATTTGGCATGAGATTGGATTGCTTTTAGTCAGCCTCTTATAGCCTA **AAGTCTTTGAGTGACTAGATGACATATCATGTAAGTTGCTGATAGGTTTCCAGTTTTCCGCTC** CTAGGTCTGCATATTGTACTTTTCCTCTTACTCGACTTAACCAGTACCAACCCAGCTTCTCAA CGGATTTATACCATGGCACTTTAAAGCCAGCATCACTGACAATGAGCGGTGTGGTGTTACTC AAGCGGGAACGCTTTCTCATAAAGAGTAACAGAACGACCGTGTAGTGCGACTGAAGCTCGC AATACCATAAGTCGTTTTTGCTCACGAATATCAGACCAGTCAACAAGTACAATGGGCATCGTA TTGCCCGAACAGATAAAGCTAGCATGCCAACGGTATACAGCGAGTCGCTCTTTGTGGAGGT GGTTACGGCCAAGTTCGGTAAGAGTGAGAGTTTTACAGTCAAGTAATGCGTGGCAAGCCAA CGTTAAGCTGTTGAGTCGTTTTAAGTGTAATTCGGGGCAGAATTGGTAAAGAGAGTCGTGTA **AAATATCGAGTTCGCACATCTTGTTGTCTGATTATTGATTTTTCGCGAAACCATTTGATCATAT** GACAAGATGTGTATCTACCTTAACTTAATGATTTTGATAAAAATCATTAGGGGATTCATCAGTA TTATGTGTGGATCTGATGAAATGAACATTCGCCTGTGGAAAAGCTAATGCTTCTGAAAAATTGG GTGTGCTTACATCACGAGAAAAAGCAGCCAAGGATTATAACCAGAAATTGAAGGAGAAATTT CAGATTCAGGAACAGCGCATCATGAAAGAAGCTCGTCGACGAAAGGAAGTGAATCGTATTAA ACACAGCAAGCCTGGATCTGTGCCACTTGTGTCAGAGAAGAAGAACACGTAGTGGCAGTT GTAAAATAATTGGTATTCCTAACAATCCTGATGTATAATTATTTGTTACTTTTGATTTGAGAACT >483

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NCGTCCGTCTCACCCGAGCTGTCCGCACTCCAAAGAACTGGGTACTCAACACTGAG CAGATCTGTTCTTTGAGCTAAAAACCATGTGCTGTACCAAGAGTTTGCTCCTGGCTGCTTTGA GGATACACAGACCGTATTCTTCATCCTAAATTTATTGTGGGCTTCACACGGCAGCTGGCCAA TGAAGGCTGTGACATCAATGCTATCATCTTTCACACAAAGAAAAGTTGTCTGTGTGCGCAAA TCCAAAACAGACTTGGGTGAAATATATTGTGCGTCTCCTCAGTAAAAAAGTCAAGAACATGTA GGTTGGAGGTTTCACTTGCACATCATGGAGGGTTTAGTGCTTATCTAATTTGTGCCTCACTG GACTTGTCCAATTAATGAAGTTGATTCATATTGCATCATAGTTTGCTTTGTTTAAGCATCACAT TAAAGTTAAACTGTATTTTATGTTATTTATAGCTGTAGGTTTTCTGTGTTTAGCTATTTAATACT AATTTTCCATAAGCTATTTTGGTTTAGTGCAAAGTATAAAATTATATTTGGGGGGGAATAAGAT ATATTGTTTTGTCTCCTAAATTGTTGTAATTGCATTATAAAATAAGAAAAATATTAATAAGACAA NNNNTAATGAAGACTAAGAAAGTTGAAAAAAAAAAACTATTTTTGAAAAAGTTAAAAAAGGGGG NNNNN

>489 NAACTGGACCTTGAANCGAATACCGTTAATNATGTCCTTGGGTCCCTCCCAATAATA ACTCCAANCCCAACCAAGAAGAATGANTAAAAATGAATCAAATCCTTTTCCTGGCAACCTTG ATTTCAATCCCAAAACCCATCTCTGTTTAAATATTGATGGAAAACAGAACCTGTGAACTCCGA TGCCCACCGTCGAAACCAAAAATTTCATTCTGGAAATTGCAAATGGATACTCTGACGGCCGA CCGAAACCTGGTGAAGCCCTTTGGGCGATTGGTGATCACCTCTAGATCCGTGAAAGCTGGC GTAACAGCAGCAGGTATTTCTTCTGGTAAATGAGAGCCTTTCGAAAACTTTCTGCCCTCAAGT ATTTACCATAAATTCTCTTTAAAGTGACATGTTCAGAATCAGGGCTCAGAGTTTGAAGTAAAG **AGTCATTTCTTAGTTCAGCTTTCAGTTTGTATACTTCAGCCTCTGCCCTTTTCAAAGATTTCTG** GAGAGTCAATTTTTCTCTGTTCCATACTTCTTTTTCAGAGGCAATGATGGCTTCAATGTTGGC GATATGCCCTGTCAGCTCAGCATTTTGTCTCAGTAGTCTTTCAGTCAATGAGCCACAAGAAG TACTTGGGGACACCAAGCTGGGCTCTTCACCTTGCTGGCCAGTTAATTTCTGTAGTTGTAAA ATAATITCATCAATATTTTCCTGAACCCAAATGAAATCTTCATCATCTGCTGTTTCAAACTGTA GTCTCTCAGAGGCTTTCTGGGGTAGAACCTGTAGTTTTGAAGCTACACATTGAAGCTTTTGT AGTITGATTCTTTTCTCTTCTATTTTCTGTTGAAGAACCCAATTTCTAGTTCTATCACTG GTTAAGCTCCACGTGGTTGGCTCATTAAGGTTCTGATACAGAATTCTTCTACTTTCTCGTTTT TCTTCTCGTTCTAGTTCTTGCTTCTGGAATTCCTGCATGATTCCTTGTAGTCGCTGTCCTTCA **AGGTCTAACTTATAAACTTGTTGTCTTTTCTCTTCCAGCTGGCGCTGAAGATCTTCCACTTTG** TTCCTGTGAACCTGCCTATCTTTTTCCATTTGCTGTCGTGTTTGCAAAGAATCCAGTTTATATT

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CCGGGCAGGTACGCGGGGTGGCGGCGTTGGGTTGAGCGGGCTTTTTGGAAGTTT GTGGCGGAGTTCTGTGATATGAGCAACAATGGACCAGAAGATTTTATCTCTAGCAGCAGAAA **AAACAGCAGACAAACTGCAAGAATTTCTTGGGCAGGGCCTGGGGAATGCTTTTTTATCTCAT** ATTAGTGCCTGTGATGGCATCTTTCATCTAACACGTGCTTTTGAAGATGATGATATCACGCAC GTTGAAGGAAGTGTAGATCCTATTCGAGATATAGAAATAATACATGAAGAGCTTCAGCTTAAA GATGAGGAAATGATTGGGCCCATTATAGATAAACTAGAAAAGGTGGCTGTGAGAGGAGGAG ATAAAAAACTAAAACCTGAATATGATATAATGTGCAAAGTAAAATCCTGGGTTATAGATCAAAA GAAACCTGTTCGCTTCTATCATGATTGGAATGACAAAGAGATTGAAGTGTTGAATAAACACTT ATTTTTGACTTCAAAACCAATGGTCTACTTGGTTAATCTTTCTGAAAAAGACTACATTAGAAAG AAAAACAAATGGTTGATAAAAATTAAAGAGTGGGTGGACAAGTATGACCCAGGTGCTTTGGT CATTCCTTTTAGTGGGGCCTTGGAACTCAAGTTGCAAGAATTGAGTGCTGAGGAGAGACAGA AGTATCTGGAAGCGAACATGACACAAAGTGCTTTGCCAAAGATCATTAAGGCTGGGTTTGCA GAAAGGGACTAAGGCTCCTCAGGCTGCAGGAAAGATTCACACAGATTTTGAAAAAGGGATTCA TTATGGCTGAAGTAATGAAATACGAAGATTTTAAAGAGGAAGGTTCTGAAAATGCAGTCAAG GCTGCTGGAAAGTACAGACAACAAGGCAGAAATTATATTGTTGAAGATGGAGATATTATCTTC TTCAAATTTAAAAACTCAAAAACCGAAGAAGAACATAAATTTTAGTTATGCTCAGATAACATAC **AACTTCAAAAGGCATCTGATTTTTACACATTAATTTCTGAAACCAATGCGACAAATAAGTCGG** GACAATGGGAATCTTGACAACAAATATTTTTTGGTTGACACTCAATATTGGTTCCCCCCCTCA TAAATGGGTTCATAATGTGACCGGTTGGTTCCGTTTTAACCCTCCATTGGAGTTTCGGACCTT **ATCCGAAACTATCCTTGTTCAGCGACATGAGAGAACGGGCCTGCTCAAAGGTTGCCGTTCAA TGAAAAAGGGGANNNN** >494

**GGTTCTGAGGCCTTGCTTCTCTTTACTTTTCCACTCTAGGCCACGATGCCGCAGTACGCGGG** GGGGTGAAGAAGGGCCGGCCTTCAAGCAACAGCGACGCAAGATGGCAGCCACCACGGG CTCGGGAGTAAAAGTCCCTCGCAATTTCCGACTGTTGGAAGAACTCGAAGAAGGCCAGAAA GGAGTAGGAGATGGCACAGTTAGCTGGGGTCTAGAAGATGACGAAGACATGACACTTACAA GATGGACAGGGATGATAATTGGGCCTCCAAGAACAATTTATGAAAACCGAATATACAGCCTT AAAATAGAATGTGGACCTAAATACCCAGAAGCACCCCCCTTTGTAAGATTTGTAACAAAAATT **AATATGAATGGAGTAAATAGTTCTAATGGAGTGGTGGACCCAAGAGCCATATCAGTGCTAGC AAAATGGCAGAATTCATATAGCATCAAAGTTGTCCTGCAAGAGCTTCGGCGCCTAATGATGT** CTAAAGAAAATATGAAACTCCCTCAGCCGCCCGAAGGACAGTGTTACAGCAATTAATCAAAA AGAAAAACCACAGGCCCTTCCCCTTCCCCCAATTCGATTTAATCAGTCTTCATTTTCCACAG TAGTAAATTTTCTAGATACGTCTTGTAGACCTCAAAGTACGGGGGGAAAATCCACAAGACAG **AATAGCCAGATCTCAGAGGAGCCTGGCTAAGCAAAACCCTGCAGAACGGCTGCCTAATTTA** CAGCAACCATGAGTACAAATGGTGATGATCATCAGGTCAAGGATAGTCTGGAGCAATTGAGA TGTCACTTTACATGGGAGTTATCCATTGATGACGATGAAATGCCTGATTTAGAAAACAGAGTC TTGGATCAGATTGAATTCCTAGACACCAAATACAGTGTGGGAATACACAACCTACTAGCCTAT GTGAAACACCTGAAAGGCCAGAATGAGGAAGCCCTGAAGAGCTTAAAAGAAGCTGAAAACT TAATGCAGGAAGAACATGACAACCAAGCAAATGTGAGGAGTCTGGTGACCTGGGGCAACTT TGCCTGGATGTATTACCACATGGGCAGACTGGCAGAAGCCCAGACTTACCTGGACAAGGTG GAGAACATTTGCAAGAAGCTTTCAAATCCCTTCCGCTATAGAATGGAGTGTCCAGAAATAGA CTGTGAGGAAGGATGGGCCTTGCTGAAGTGTGGAGGAAAAAATTATGAACGGGCCAAGGCC

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## Table 4

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### Table 4

TCACAAGGATGGGTGCTGCAGACAATATATATAAAGGACGGAGTACATTTATGGAAGAACTG ACTGACACAGCAGAAATAATCAGAAAAGCAACATCACAGTCCTTGGTTATCTTGGATGAACTA GGAAGAGGGACGACTCATGATGGAATTGCCATTGCCTATGCTACACTTGAGTATTTCAT CAGAGATGTGAAATCCTTAACCCTGTTTGTCACCCATTATCCGCCAGTTTGTGAACTAGAAAA AAATTACTCACACCAGGTGGGGAATTACCACATGGGATTCTTGGTCAGTGAGGATGAAAGCA GAGGAATTGCAGCAAGGAGTTATGGATTAAATGTGGCTAAACTAGCAGATGTTCCTGGAGAA GAGACTCAAGTATTTTGCAAAGTTATGGACGATGCATAATGCACAAGACCTGCAGAAGTGGA CAGAGGAGTTCAACATGGAAGAAACACAGACTTCTCTTCATTAAAATGAAGACTACATTT GTGAACAAAAATGGAGAATTAAAAATACCAACTGTACAAAATAACTCTCCAGTAACAGCCTA TCTTTGTGTGACATGTGAGCATAAAATTATGACCATGGTATATTCCTATTGGAAACAGAGAG TTTTCTGAAGACAGTCTTTTTCAAGTTTCTGTCTTCCTAACTTTTCTACGTATAAACACTCTT GAATAGACTTCCACTTTGTAATTAGAAAATTTTATGGACAGTAAGTCCAGTAAAGCCTTAAGT GGCAGAATATAATTCCCAAGCTTTTGGAGGGTGATATAAAAAATTTACTTGATATTTTTATTTGT TTCAGTTCAGATAATTGGCAACTGGGTGAATCTGGCAGGAATCTATCCATTGAACTAAAATAA CCAGGCATGGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGGCCAAGGTAGGCAGATCA CCTGAGGTCAGGAGTTCAAGACCAGCCTGGCCAACATGGCAAAACCCCATCTTTACTAAAAA TATAAAGTACATCTC

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CTGGCTACTCGGAAACGGCTGTCCTGGGGCTAATCCACTGCTAATTCCGTTAGTTCCTGTCA AGCACTGGCCATTCCTGCTTTCCATCCCACTGAGCGGGGTCGTGGAGGGGAAGTCCAAATG TCCATTGATGACACATCCATTTGTCAATGTATTCGATACGGAGCTACTGTTTTTCATATCTGTT ACAACAGCAAACTCCCTATCAACGTGCATTTTGTCAGCATCGTCTTCTGTGTCGCCATTCGT CTGAGTCCTCCAAGCATCTCTTTCGATTTGTTCCCACACTAATATGATTAGGAAATACATTCT GATGACCCCCATTTAAGATGCCATTGTTATAGAAATGGTTCAGATGACAATTCTGGAGGTTCA AGAGAGACTGGGCACACTCTTGGAAACCCTGGGTTTGTGCAATGTCTGCTGCTGTCAGGCC ACTGGCATTTCTCAGGTCGACGTGAGCCCCATTCGCCACAGGGCACTGATGCATTCTAGG CTCCCAGAGCGAGCTGCCTTGTGAATGGGAGTTTCACCCTCACAATCCGGTTTGTTAATGTT GGCTCCTGCTTGAATCAGCCAGACCAGGCACTGAGGATGTCCCCCAAAGGCTGCAATGTGG GCTGGCGTCTGCGCGTACCGTGTGGTGGAGACGTTGAGTGTGGCTCCCGCTCTCACCAACT GCACTAAGCACTCCAACTTGCCGAAATGCGCGGCCCAGTGCACGGGCGTCCAGCCATAGAA GGAGTCCTCAGAGGCCAGGTGGGCGTGGGGTGTCTGCCAGCAGCGAGCAGAGCGTGG CCAGGTCCCCGTCGCGGCAGGCGCGGTGCAGCGGGAAACGGAGCGAGAGCAGCTCCTCG AGAGCGCGGGCTCGCTGGCCTAGAGGACGCGTCGGGGAGGACTCGAGAAGCCGCCGCC GCAGCACAAAGGAACGAGACTAGCGCCGCGGTCGCGTCCCACAGGCTGCCGAGCGGAGC **GCGNNN** 

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ATGGCTTGCTAATAAAAGACACCATTGGGTTTGACACACTAGGTCATTGTTTCTTTTTGGAAG ATGGTATTGAACAGAGGAATACTTTGTTCCACAATCTGGGACTCCTCACCAAGCCGGGTACT CTCCTGCCCACCGATAGGAACAACTCCATGTGTACCACCATGCGAGATAAAGTGTTTGGAAA TTACATTCCTGTGCCTGCTACTGACTGTATGGCTGTTTCAACTTTCTGGATTGCTCATCCCAA GTGTCAAAACAACCAACTCTAGTGCTGCTGACCCAAGGGAATACCTCTGTTTGGACAATAGT GCAAGATTTCGACCTCATCAGGATGCAAACCCCGAAAAACCACGTGTTGCTGCTCTAATTGA CAGGCTCATTGCTTTTAAAAATAATGATAATGGAGCTTGGGTCAGAGGAGGAGATATTATCG TTCAAAATTCAGCATTTGCAGATAATGGAATAGGACTGACCTTTGCCAGTGATGGAAGCTTC CCAAGTGATGAAGGTTCCAGCCAAGAGGTATCTGAATCTCTTTTGTTGGGGAGAGCAGGA ATTACGGCTTTCAGGGTGGTCAGAACAAGTATGTAGGCACTGGAGGAATAGACCAGAAGCC TCGAACATTACCCAGGAACAGGACGTTCCCAATTAGAGGCTTTCAGATTTATGATGGGCCCA TTCATCTCACAAGGAGCACTTTCAAAAAATATGTGCCAACTCCAGATAGGTACAGCAGTGCA ATTGGCTTCCTCATGAAGAATTCCTGGCAGATAACCCCCAGGAATAATATCTCCCTCGTGAA GTTTGGTCCACATGTCTCTCTGAATGTCTTTTTTGGAAAGCCTGGTCCCTGGTTTGAAGATTG TGAGATGGATGGTGATAAGAACTCCATATTCCATGACATTGATGGCTCTGTGACAGGATACA AGGATGCTTATGTGGGAAGAATGGACAACTACCTGATCCGCCATCCAAGCTGTGTAAATGTG TCTAAGTGGAATGCAGTGATCTGCAGTGGGACCTATGCACAGGTCTATGTACAGACATGGA GCACTCAGAATCTTTCTATGACCATTACACGAGATGAGTATCCGTCCAACCCTATGGTGCTC CGAGGTATTAATCAGAAGGCTGCCTTTCCACAGTACCAGCCTGTCGTCATGCTGGAGAAGG GTTATACCATCCACTGGAATGGGCCGGCACCACGGACTACATTTCTATACCTCGTCAACTTC AACAAGAATGACTGGATTCGAGTTGGCCTTTGCTATCCATCAAACACAAGTTTTCAAGTTACC TTTGGCTATTTGCAGCGGCAGAATGGCTCATTATCCAAAATCGAAGAATATGAGCCTGTGCA TTCACTGGAAGAACTGCAAAGAAAGCAATCCGAGAGGAAATTCTATTTTGACTCCAGCACGG GGTTACTGTTTTTGTATCTCAAAGCCAAAAGCCACAGGCATGGCCACAGTTACTGTTCATCTC AGGGATGTGAAAGAGTCAAGATCCAAGCAGCCACAGACTCAAAGGACATCAGTAACTGCAT GGCCAAAGCATACCCACAGTACTACAGAAAGCCGTCAGTGGTCAAGCGGATGCCGGCCATG CTCACTGGACTCTGTCAAGGCTGTGGCACTCGGCAGGTGGTGTTTACTAGTGATCCTCATAA AAGTTACCTCCCTGTGCAATTCCAGTCACCTGATAAAGCAGAAACCCAGCGTGGAGACCCGT CTGTTATTTCTGTCAATGGCACTGACTTTACCTTCCGAAGTGCAGGCGTCCTCCTTGTTG TGGATCCGTGCAGCGTTCCATTCCGCTTGACGGAAAAAACGGTTTTTCCTCTTGCTGATGTC AGTCGCATTGAAGAGTATTTAAAAACAGGCATCCCTCCAAGGTCCATTGTTCTGTTGAGCAC AAGAGGAGAAATAAAGCAGTTAAACATTTCACACTTACTAGTACCTCTGGGATTAGCCAAACC AGCTCATCTTTATGACAAAGGGAGTACCATATTTTTGGGATTCAGTGGAAACTTTAAACCATC ATGGACTAAGCTATTTACCAGTCCTGCTGGACAGGGCCTTGGGGTGCTTGAACAATTCATAC CTTTGCAGCTGGACGAATATGGTTGTCCCAGAGCCACCACTGTCCGCAGAAGAGACCTGGA **ACTGCTAAAGCAAGCTTCAAAAGCACATTAGAGACTAACTGTAACTTAAGTGCTGGGGGAAA** AAAAATGTGAACTAACTTATTTAATTTATGGCATTTTAAAATGACACTGTTAACCCAACGGAAC CATTTTCCAGTTTGATACAGAATGGGGAGAAAAGAAAGCGTTTGAAATTATTGCTTGGATACC GTATTCAGAGAGCAGATCTCTTATTCCTCACTTTCCACCCCGTATTTTGTAATGACCATGAG CAATGTTTTTACTTTTTGTATAATGGGGTGGGGTGGAGTGGGGGGCTTCTGAGAGTCAGCCTG AGGTCTTTAGAGGACCAGCTATTGTAGCACCTTGGATACTTGAAGTTTAATGCTCAGTTGGG TCGGGTGGCAGTTGACTTGGTGGCTGGCATGTTCAGCAGTGCCTGGGGCCCTGTTTCTGGG CAGCCTTTGAGGATTTTCTATGATATTGAATGACAGTTTTAAGTGGCAACTCAGGCCCAGCTC ATGCCCTTTTTTGCCTGGACATGTGCTATTTTTATTCACTTATATATCAATTACTTGTAAGGGT TAAACTTTCAAACAGGAAGTATATTGGGACAAAAGGGCTCTTGGGGATTAGATATCCCTTTAA TCTGTGACCATTGGGCAAAAAATTTTCCTGCAGCAAAAGTCTGAGGCTGTTGGGACCATTTT TGCAGCTTTAATCCTTAGCCTCTTTTGACTGTATATTTGTGTTTAAAATGCAGAGCTCAACTGA ATATTTCCTTTTTTGTTTTGTTTTGTTTTAAGAAGTAGGTTGTTTTCCTGAACCGTAAAC TTGTATCATTTTAACTTGCACAAAGGAAGTCTGTTCTTGGTATTGCTCTTGCACTTGGGTTTTT TGTTATTGTTTTGTGTGGATTTTTTAAAGCTTTTCTGTTCACCCTCCTGCCAGGAAAATCCCA GAAAGCTTAATGATACCCCAAAATGATTACACCCAGGGAGGAAAAAAAGGAGCGCTTTCTAG GGTCAGAATCGTGGAGAGAATACTCAGAAATGAACCTCTTTAAAGCCTTGCAGGAATGAGTC

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GAAAGGTGCACTTACCTAACCATTCCGAACTGGGCTCGGCAGGATCTTCGCTCTCTCGCCT CTGGACAGATTTCTGCTCTCTCTCAGCTCAAACAGCAACCTCAAGTTTCTGGAAGTGAAAC AAAGCTTCCTGAGTGACTCTTCTGTGCGGATTCTTTGTGACCACGTAACCCGTAGCACCTGT CATCTGCAGAAAGTGGAGATTAAAAACGTCACCCCTGACACCGCGTACCGGGACTTCTGTCT TGCTTTCATTGGGAAGAAGACCCTCACGCACCTGACCCTGGCAGGGCACATCGAGTGGGAA CGCACGATGATGCTGATGCTGTGACCTGCTCAGAAATCATAAATGCAACCTGCAGTACCT GAGGTTGGGAGGTCACTGTGCCACCCCGGAGCAGTGGGCTGAATTCTTCTATGTCCTCAAA GCCAACCAGTCCTGAAGCACCTGCGTCTCTCAGCCAATGTGCTCCTGGATGAGGGTGCCA TGTTGCTGTACAAGACCATGACACGCCCAAAACACTTCCTGCAGATGTTGTCGTTGGAAAAC TGTCGTCTTACAGAAGCCAGTTGCAAGGACCTTGCTGCTGTCTTGGTTGTCAGCAAGAAGCT GACACACCTGTGCTTGGCCAAGAACCCCATTGGGGATACAGGGGTGAAGTTTCTGTGTGAG GGCTTGAGTTACCCTGATTGTAAACTGCAGACCTTGGTGTTACAGCAATGCAGCATAACCAA GCTTGGCTGTAGATATCTCTCAGAGGCGCTCCAAGAAGCCTGCAGCCTCACAAACCTGGAC TTGAGTATCAACCAGATAGCTCGTGGATTGTGGATTCTCTGTCAGGCATTAGAGAATCCAAA CTGTAACCTAAAACACCTACGGTTGAAGACCTATGAAACTAATTTGGAAAATCAAGAAGCTGTT GCACCTCCGTGCTGTGACTTTTTTTGCTGAGCAGCCTGGGATCGCTCTACGAATTACACAGG AAGCGGGATTCGGGTCTCTAAGATGTCTTATGAATGCAGGTCAGAGGGTCACATGTTAACAC TAGAGTCTGTCGAGAGGTAGGATTTGACACTGGTTTTCTCACTATTTTTGGGAGATTCTGCAC GAGTCACGCACCCCTTCACATGACGCTATGTACTTTCTCACAGGGATAATAAAGTTAGAGC >556

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AAGTACGTCTGGTACCGGGAGGGATGACAATGCTTTCTGTCGACTTGAAATCCTTGCAG
TGGAGTGGCAGGGTGCTTACAGGGTTTTAAATCACACGGGCATGTATTAGAATACCTTGCAG

### Table 4

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AGAGCAAGGATGACCAGGTGACCGTTATCGGGGCTGGGGGTGACCCTGCACGAGGCCTTG GCCGCTGCCGAACTGCTGAAGAAAGAAAGATCAACATCCGCGTGCTGGACCCCTTCACCA TCAAGCCCCTGGACAGAAAACTCATTCTCGACAGCGCTCGTGCCACCAAGGGCAGGATCCT CACCGTGGAGGACCATTATTATGAAGGTGGCATTGGTGAGGCTGTGTCCAGTGCAGTAGTG GGCGAGCCTGGCATCACTGTCACCCACCTGGCAGTTAACCGGGTACCAAGAAGTGGGAAG CCGGCTGAGCTGCTGAAGATGTTTGGTATCGACAGGGATGCCATTGCACAAGCTGTGAGGG GCCTCATCACCAAGGCCTAGGGCGGGTATGAAGTGTGGGGCGGGGGTCTATACATTCCTGA GATTCTGGGAAAGGTGCTCAAAGATGTACTGAGAGGGGGGTAAATATATGTTtgaGAAAAAT cccctcaggggaggttttaaaagaaannanagAATGGATGGTATAGTCAAAATGCTGAAAGAACAAAACC TGTCAGCTAAGAATACTGTACCCAGCAAAGCTATCCTTCaaaAATGAACGTGAAATAAACTCT TTCCCAGACAAGGAAAAGCTGAGATAATTCATCACCACTAGATTGGCCTAACAAGAAATGATT ATGCTGAGTCCTACAGCAAGAAGTGAAAAGCAGGTAATTACTGTCATGAAAACATCAGAAAT TATAAAACTCAcAGATAqAGATAAATTTGTAaTCAAAcTcGTaatACTCCAATACTATGATGATGC TgtgTaAATCTTtCagacctcaactctgaaggtTaAAAGTcaaaaTAGtaataaCta >566

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## Table 4

TTCAAGACATATTTGCTGGACTGGTTACAAGTATTGGCACTGCAATACGATATTGGTTTCATT ATACACTTGTGGCCTTTGCATGGTTGGGAGTTGTTCCTCTTACAGCATGCCGCATCTACAAG TGCTTGTTTACTGGCTCCGTGAGCTCACTACTGACGCTGCCATTAGATATGCTGTCAACGGA AAATTTGTTGGCAGATTGTTTGCAGGGTTGTTTTGTGGTGACGTGCACACTGTGTGCATTCAT GCTGCCCCACCGTTCAATGCTGCGGGGCATCACCAAAATGAGGCTCCAGCAGGAGGAAATG GTGCAGAAAATGTTGCTGCTGATCAGCCTGCTAACCCACCAGCTGAGAACGCAGTGGTGGG GGAAAACCCTGATGCCCAGGATGACCAGGCAGAAGAGGAGGAGGAGGACAATGAGGAGGA AGATGACGCTGGTGTGGAGGATGCGGCAGATGCTAATAACGGAGCCCAGGATGACATGAAT TGGAATGCTTTAGAATGGGACCGAGCTGCTGAAGAGCTTACATGGGAAAGAATGCTAGGAC TTGATGGATCACTAGTTTTTCTGGAACATGTCTTCTGGGTGGTATCTTTAAATACACTGTTCAT TCTTGTTTTTGCATTTTGCCCTTACCATATTGGTCATTTCTCCCTTGTTGGTTTGGGATTTGAA GAACACGTCCAAGCATCTCATTTTGAAGGCCTAATCACAACCATAGTTGGGTATATACTTTTA GCAATAACACTGATAATTTGTCATGGCTTGGCAACTCTTGTGAAATTTCATAGATCTCGTCGC TTACTGGGAGTCTGCTATATTGTTGTTAAGGTCTCTTTGTTAGTGGTGGTAGAAATTGGAGTA TTCCCTCTCATTTGTGGTTGGTGGCTGGATATCTGTTCCTTGGAAATGTTTGATGCTACTCTG AAAGATCGAGAACTGAGCTTTCAGTCGGCTCCAGGTACTACCATGTTTCTGCATTGGCTAGT GGGAATGGTATATGTCTTCTACTTTGCCTCCTTCATTCTACTACTGAGAGAGGTACTTCGACC TGGTGTCCTGTGGTTTCTAAGGAATTTGAATGATCCAGATTTCAATCCAGTACAGGAAATGAT CCATTTGCCAATATATAGGCATCTCCGAAGATTTATTTTGTCAGTGATTGTCTTTGGCTCCATT GTCCTCCTGATGCTTTGGCTTCCTATACGTATAATTAAGAGTGTGCTGCCTAATTTTCTTCCA TACAATGTCATGCTCTACAGTGATGCTCCAGTGAGTGAACTGTCCCTCGAGCTGCTTCTGCT TCAGGTTGTCTTGCCAGCATTACTCGAACAGGGACACACGAGGCAGTGGCTGAAGGGGCTG CCAGGAAGAAATGAAAACAGTGCAAATCAACAAGTTAACAATAATCAGCATGCTCGAAATAA CAACGCTATTCCTGTGGTGGGAGAAGGCCTTCATGCAGCCCACCAAGCCATACTCCAGCAG GGAGGGCCTGTTGGCTTTCAGCCTTACCGCCGACCTTTAAATTTTCCACTCAGGATATTTCT GTTGATTGTCTTCATGTGTATAACATTACTGATTGCCAGCCTCATCTGCCTTACTTTACCAGT ATTTGCTGGCCGTTGGTTAATGTCGTTTTGGACGGGGACTGCCAAAATCCATGAGCTCTACA CAGCTGCTTGTGGTCTCTATGTTTGCTGGCTAACCATAAGGGCTGTGACGGTGATGGTGGC ATGGATGCCTCAGGGACGCAGAGTGATCTTCCAGAAGGTTAAAGAGTGGTCTCTCATGATCA TTTGAGCTGGTCATTGTGGCTCCCCTGAGGGTTCCCTTGGATCAGACTCCTCTTTTTATCCA TGGCAGGACTGGGCACTTGGAGTCCTGCATGCCAAAATCATTGCAGCTATAACATTGATGG GTCCTCAGTGGTGGATGAAAACTGTAATTGAACAGGTTTACGCAAATGGCATCCGGAACATT GACCTTCACTATATTGTTCGTAAACTGGCAGCTCCCGTGATCTCTGTGCTGTTGCTTTCCCTG TGTGTACCTTATGTCATAGCTTCTGGTGTTGTTCCTTTACTAGGTGTTACTGCGGAAATGCAA AACTTAGTCCATCGGCGGATTTATCCATTTTTACTGATGGTCGTGGTATTGATGGCAATTTTG TCCTTCCAAGTCCGCCAGTTTAAGCGCCTTTATGAACATATTAAAAATGACAAGTACCTTGTG GGTCAACGACTCGTGAACTACGAACGGAAATCTGGCAAACAAGGCTCATCTCCACCACCTC CACAGTCATCCCAAGAATAAAGTAGTTGTCTCAACAACTTGACCTTCCCCTTTACATGTCCTT TTTTGTGGACTTCTCTTTTGGAGATTTTTCCCAGTGATCTCTCAGCGTTGTTTTTAAGTTAAA TGTATTTGACTTGTGTTCTCAGCATTCAGAGAGCAGCGGTGTAAGATTCTGCTGTTCTCCCT GGATCTTCTGACATTACTGCTGTCTGAGATTTGTATATGTGTAAATACAAGTTCCTTGATACC CTAAAACCTTGGATTAAACAGAATGTGCATTGTACATCTTTAAACAAAATGTATATTAATTTAT TAAATCTAGTTGTCACTTTATTTTGGACCTGCTGTGATCTCGACAGGAAACGTGCCACAGAG CAGTAGTGCGCAGGCAAGACTTTTCAGTGACGCCTTGTGGAACGCAGTTCATGATGTCCTA GCAGCTCTCACTAAGGGAACTGTACATTCTTTCTTTCTTGGCTATTCAGACCTTACCAAGAAC GTTAAAGGAAACAAGTAGAAATCAGCAGTGGAGTGTCTGTGGTAAGAAAACATGAACTTTAT GCTTCACTGTTAGTTGTTGTGGAAGTTATTTTGTATAACACCAAAGCTGTTGTACATTTCCTA CTGCCTGATTTTTTCATGTGTCTGTGTTTTGTAATATTGTATAGTATCTTGTGCTAGGTGAGGA **AATTATTTTTAATTTTGATAATTTAATATTCCTAGTGTGATCAGCATTGGGAGTTGGGTTTCAG** TGGGGCATGTCTATACTTAGAGAAAAAAAGTCCAAATGAAGATTTTCATGAGTCAGCCCCCC GTAGCAGTGGCCGAAAGTCCTGCAAGGTCATAAATCTTTCAGAGTGACATCACCAACTGTAC TGCATCTTACTGGATTTAGGACTTCTGAGATGCTTGTGAAGTATAGATGTGGTTGTGGTCTTA

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NNNNNNCAAATTCTCTTTATTGCTTTATGTCCCTGACTCATGCAGGCCAAAGGG GAGGAGCTTGAAAGGAAGAACCCGACCAAAGGGCAGGAGACCCGGCTCTCCAGGTCGCGG GGCCTCCTGGGCCGGGAGGTGGGAGGTGAGCTCCGCCAGCCCAGCCCACTGCAGACAGG AGGGAGCCCCCCCCCCCCAGCTGTAACCGGGCCGGCTTCAGTGTCGCCGCCATCTTTGTT TCTCACCGCGGTCTTTTCCTCCCACTCTTGGCTGGTTGGACCCCGCTATGGAAAAGTTGGCC CCTGAGCCAGAGCTCCAGCAGCCTTGTTAGGGCGTGGCCTGAGGCTTGGATAAGTGGGAT GTAAAACGAAGATCAGGAGCAGATTTGAAGAATTACAAAGTGAATTGGTGCCAGTCAGCATG TCAGAGACAGACCACATAGCCTCTACTTCCTCTGATAAAAATGTTGGGAAAACACCTGAATTA AAGGAAGACTCATGCAACTTGTTTTCTGGCAATGAAAGCAGCAAATTAGAAAATGAGTCCAA **ACTATTGTCATTAAACACTGATAAAACTTTATGTCAACCTAATGAGCATAATAATCGAATTGAA** GCCCAGGAAAATTATATTCCAGATCATGGTGGAGGTGAGGATTCTTGTGCCAAAACAGACAC AGGCTCAGAAAATTCTGAACAAATAGCTAATTTTCCTAGTGGAAATTTTGCTAAACATATTTCA AAAACAAATGAAACAGAACAGAAAGTAACACAAATATTGGTGGAATTAAGGTCATCTACATTT CCAGAATCAGCTAATGAAAAGACTTATTCAGAAAGCCCCTATGATACAGACTGCACCAAGAA **ATTTATTTCAAAAATAAAGAGCGTTTCAGCATCAGAGGATTTGTTGGAAGAAATAGAATCTGA** GCTCTTATCTACGGAGTTTGCAGAACATGGTGTTTTGGGGACAGGTTGTGGTGAAGGTGGGA AAATGGGGGCTTTAAGGTTTAAAAAAGCCGGGTGGATTTGANNN

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ATTCCTAATGTTGTAAAATACAGCCCGAACTGCAAGTTGCTTATTGTTTCAAATCCAGTGGAT ATCTTGACCTACGTGGCTTGGAAGATAAGTGGTTTTCCCAAAAACCGTGTTATTGGAAGTGG TTGCAATCTGGATTCAGCCCGATTCCGTTACCTGATGGGGGAAAGGCTGGGAGTTCACCCA TTAAGCTGTCATGGGTGGGTCCTTGGGGAACATGGAGATTCCAGTGTGCCTGTATGGAGTG GAATGAATGTTGCTGGTGTCTCTCTGAAGACTCTGCACCCAGATTTAGGGACTGATAAAGAT AAGGAACAGTGGAAAGAGGTTCACAAGCAGGTGGTTGAGAGTGCTTATGAGGTGATCAAAC TCAAAGGCTACACATCCTGGGCTATTGGACTCTCTGTAGCAGATTTTGGCAGAGAGTATAATG AAGAATCTTAGGCGGGTGCACCCAGTTTCCACCATGATTAAGGGTCTTTACGGAATAAAGGA TGATGTCTTCCTTAGTGTTCCTTGCATTTTGGGACAGAATGGAATCTCAGACCTTGTGAAGGT GACTCTGACTTCTGAGGAAGAGGCCCGTTTGAAGAAGAGTGCAGATACACTTTGGGGGATC CAAAAGGAGCTGCAATTTTAAAGTCTTCTGATGTCATATCATTTCACTGTCTAGGCTACAACA GGATTCTAGGTGGAGGTTGTGCATGTTGTCCTTTTTATCTGATCTGTGATTAAAGCAGTAATA TTTTAAGATGGACTGGGAAAAACATCAACTCCTGAAGTTAGAAATAAGAATGGTTTGTAAAAT CCACAGCTATATCCTGATGCTGGATGGTATTAATCTTGTGTAGTCTTCAACTGGTTAGTGTGA GCCAGGTGGATGTTTACCGTGTGTTATATAACTTCCTGGCTCCTTCACTGAACATGCCTAGT CCAACATTTTTCCCAGTGAGTCACATCCTGGGATCCAGTGTATAAATCCAATATCATGTCTT GTGCATAATTCTTCCAAAGGATCTTATTTTGTGAACTATATCAGTAGTGTACATTACCATATAA TGTAAAAAGATCTACATACAAACAATGCAACCAACTATCCAAGTGTTATACCAACTAAAACCC gttaaacaatggggggggggcgcagtgaagaacgggcaaggggcagagagacgggccgcaagggggtttccccaaaaaaccgg gccggtccgaaacagggtcgggtcgggaac >578

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AGTTACTCCATAAAAGATTGTTGTACCTCGGCCGCTCTAG
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### Table 4

NNCTGTATTTTAGCAGGACTGATCGTTTTTCTAAGTAGACCTGAGCTTTGTTTATCAG TGAAATTCAAGGAGAAAATGAGGTTAATGAAGAGGTATCAGTTAAATATCCCCTTCTTCTCAC CCTGCCAAAATTAGCAGTTGGATTTTTGGAAACTCTGGAATATTCTGGGTCATTTTGTTTTGT ATGTTTGTTGTTTTCGTCTTCCAAAGGTGAAAGCTATGATACAGTTCCACTTAAATTTTAGTG TTTTCTTACTCAGCTCAAGCATTAATTTTTGATTAAGTCTTAATCTGCATGACCTGTGAATCTG AATCCATCATCTCCCTTTCCTGCCAGCTTTTCTACAAACATTGAAATATGTTATTTGGTCAGCA GAGACCAGCTGTACCATCCAAATGCTTCCCTGGTCTTGATGATCTCTTCCAGAGTCGATCTG AGTGGCCTTTTCTGCACCCTCCCCTTCTTTCTCTTTGAATGGAATTAAACCCAATTTGGAAAC AACATTGACCCAGTCAAAAGCTTCTAATGGTTTCTTTTTCTTCCTCCAGTTTTAGTTTGCTTTT **ATTAAAAAAAGAAAATAGTGCATGGCCATAGCTCCTTCAGTTCTCTTATTGCAGACTAACCAT** CAGGATGGTATCAAAGCACAAATACTTTGGAGGGGAATGCGTTGAACTGGGGCAAGTACTC TGTAACACAAAGTGGGAAACCACTTCCTGGTGCTGCCGCTCCTGCCCCCACTTTAGGTGGG AGGGACGAGTTTTGCCCTCTAGATTTTAATCCAGCTGGTGTCCACCGGATGTTGCCCTCCTG GGGAGCAGATATCAGTCTGTGGAACTCTGGGAAAACCACAGGCACATTTTTCGGTGCGGAC AGATTTGCCAGCACATAACTGGGCAGCCAGCTAGAATACTTTGTGGAAATTAAGCGAGGTTT TCCATTTCAGCCCCATGGTGCATGGTGGTGGCCGATGAATGTGTCAGTCTGCTCAGAGAAA GTGTGTTTTTGTCTCTGTATAGGTAGAGGTATTCACATCTTACTCCGACTGTAAGGTTGTC TTACTTCATCTCTGCCCCCACCACAGTTGCCATTTTGTAATGTCCTTCCAACATGGAGAAGAC ACGAGCTCTCTCCAGTTGGCATCATTTGTCTTTTTTGTTGATTGCCTCATTCTCCAGTGAACT CCATCTGGCCAATTGATTCAGAATCAGGCAAGATCCCTGCCCTTTGGCACATCCACTGAAAG ACTGGCCGTCGTTTTACAACGTCGTGACTGGGAAAACCCTGGCGTTACCCAACTTAATCGCC TTGCAGCACATCCCCCTTTCGCCAGCTGGCGTAATAGCGAAAAGGCCCGCACCGATCGCCC TTCCCAACAGTTGCGCAGCCTGAATGGCGAATGGCAAATTGTAAGCGTTAATATTTTGGTAA AATTCGCGTTAAATTTTTGTAAATCAGCTCATTTGTAACCTGGCCGTCGGCNNNN

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**CTAATGTANNNNN** 

### Table 4

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NNNNNNNCCGCCCGGCAGGTACGCGGGGATGACGCAAGAGCCCGCTCTCACTTT TCAGCGGCAGGCGAAGGGGCTGAGGAAAGGAGGTGGGTCTAGGCAGGGGAAATTGGGG TGCCACCAGACGGAGACAGCTTGGACTACCAGAATCAAGCACTCTTTTGGAAGAGGGGTAAT CTCTCCCAAAAACTGAGGACACTTACCTTCCCCATATATTGAGTCCAGCTGTGTTTGGTGG CCCAGGTACTAATTTCAAGATGCCAGGACGTTCCAGTTCAAATTCAGGTTCAACTGGTTTCAT CTCCTTCAGTGGTGTAGAGTCTGCTCTCCTCCTTGAAAAACTTCCAAGCCTGTATCAACTC TGGTATGGACACAGCTTCTAGTGTTGCTTTGGATCTTGTGGAAAGTCAGACTGAAGTGAGTA GTGAATATAGTATGGACAAGGCAATGGTTGAATTTGCTACATTGGATCGGCAACTAAACCATT ATGTAAAGGCTGTTCAATCTACAATAAATCATGTGAAAGAAGAACGTCCAGAAAAAATACCAG ATTTAAAATTATTGGTAGAGAAGAAATTTTTGGCTTTACAGAGCAAGAATTCTGATGCAGACT TTCAAAATAATGAAAAATTTGTACAGTTTAAACAACAGCTGAAAGAACTAAAGAAGCAATGTA AGTCAACATGCTTGGTTCGGCTTTTTGAAATTAGGGAACTGACTTGATGAACAGCCCA GTTAACTTGATTTATAAAGTTGCTTATCTGCTGGGTGATCTCATTCTAGTGCGTTAATGTTGT GCAATCGGATTGGGTAATTTGGTCAATCAGCTGGCATTTTGGAAGCAAGGTTCCCAAGTGGC CGAAATTCCGAAGTGTGATTGTATTGTCCATTGCGGCGGAGGGGACGTGTGAAACAACATTA AGGGAAGCACATATTTCTAGCACAAAAAAGGGGAGCGACAAAGAACTCAGTGGCACCATGC GTACGACACTTGTAAGCGGCCACATAGGAGTATAATAAAGACGGGGGATCAACATAGAAAAAA CATCATATGTATAACCATCATGTATGGTGAACGCACTCAGACAGTTGATGTTGTAGAAATAGG **AGTTTCGAACTAGAGGACGTAATCATAGANN** >586 >587

NNNCTCGTGGGCAGAGGAACAACCAGGAACTCGGGCTCAGTCTCCACCCCACAGT GGGGCGGATCCGTCCCGGATAAGACCCGCTGTCTGGCCCTGAGTAGGGTGTGACCTCCGC AGCCGCAGAGGAGGAGCGCAGCCCGGCCTCGAAGAACTTCTGCTTGGGTGGCTGAACTCT GATCTTGACCTAGAGTCATGGCCATGGCAACCAAAGGAGGTACTGTCAAAGCTGCTTCAGG ATTCAATGCCATGGAAGATGCCCAGACCCTGAGGAAGGCCATGAAAGGGCTCGGCACCGAT GAAGACGCCATTATTAGCGTCCTTGCCTACCGCAACACCGCCCAGCGCCAGGAGATCAGGA CAGCCTACAAGAGCACCATCGGCAGGGACTTGATAGACGACCTGAAGTCAGAACTGAGTGG CAACTTCGAGCAGGTGATTGTGGGGATGATGACGCCCACGGTGCTGTATGACGTGCAAGAG CTGCGAAGGGCCATGAAGGGAGCCGGCACTGATGAGGGCTGCCTAATTGAGATCCTGGCC TCCCGGACCCCTGAGGAGATCCGGCGCATAAGCCAAACCTACCAGCAGCAATATGGACGGA GCCTTGAAGATGACATTCGCTCTGACACATCGTTCATGTTCCAGCGAGTGCTGGTGTCTCTG TCAGCTGGTGGGAGGGATGAAGGAAATTATCTGGACGATGCTCTCGTGAGACAGGATGCCC AGGACCTGTATGAGGCTGGAGAGAAAATGGGGGACAGATGAGGTGAAATTTCTAACTGT TCTCTGTTCCCGGAACCGAAATCACCTGTTGCATGTTTTGATGAATACAAAAGGATATCACA GAAGGATATTGAACAGAGTATTAAATCTGAAACATCTGGTAGCTTTGAAGATGCTCTGCTGG CTATAGTAAAGTGCATGAGGAACAAATCTGCATATTTTGCTGAAAAGCTCTATAAATCGATGA AGGGCTTGGGCACCGATGATAACACCCTCATCAGAGTGATGGTTTCTCGAGCAGAAATTGA CATGTTGGATATCCGGGCACACTTCAAGAGACTCTATGGAAAGTCTCTGTACTCGTTCATCA AGGGTGACACATCTGGAGACTACAGGAAAGTACTGCTTGTTCTCTGTGGAGGAGATGATTAA AATAAAAATCCCAGAAGGACAGGAGGATTCTCAACACTTTGAATTTTTTTAACTTCATTTTTCT ACACTGCTATTATCATTATCTCAGAATGCTTATTTCCAATTAAAACGCCTACAGCTGCCTCCTA GAATATAGACTGTCTGTATTATTCACCTATAATTAGTCATTATGATGCTTTAAAGCTGTAC GTTTTTAAAAGATTACTTTCTACTTTGTGTTTCACAGACATTGAATATTAAATTATTCCATAT TTTCTTTTCAGTGAAAAATTTTTTAAATGGAAGACTGTTCTAAAATCACTTTTTTCCCTAATCCA ATTTTTAGAGTGGCTAGTAGTTTCTTCATTTGAAATTGTAAGCATCCGGTCAGTAAGAATGCC CATCCAGTTTTCTATATTTCATAGTCAAAGCCTTGAAAGCATCTACAAATCTCTTTTTTTAGGT ATGTTGAAATCACTTTCTGTAGTCAAAGTATACCAAAACCAATTTATCTGAACTAAATTCTAAA **GTATGGTTATACAAACCATATACATCTGGTTACCAAACATAAATGCTGAACATTCCATATTATT** TTCTGGGAATGATGTAATGCTCTGAATTTAGTATGATATAAAGAAAACTTTTTTGTGCTAAAAA TACTTTTTAAAATCAATTTTGTTGATTGTAGTAATTTCTATTTGCACTGTGCCTTTCAACTCCAG 

### Table 4

CACCITITAATTCTTATGAACTTGGGCAAAAGGATTAAAATTCTACTTTGGTATCTTTTGA AAGAAAACAGAAAGTGGACATTTTAACTATAAGTTTCTTATCAGCCTACAATCAGATGAAGGA AACTGGTAAAAATTTCTCACTGTAATAATTGAAGAGTCTGATATTCCACCATACTTATTTTATG GATGAAGTAATATTTGGGATAATATAAAAGACTTGCATAGATATGTATATCAAATTAATAGTTT AACTCGGATGTGAGCTTTTAATTTCTTATTTAGTTATTAAGCATACTGCCTCCTGAATTAACTG CTTTTCATTTTCTTCAAGATCTAATTATCATGGACCTGCAACAGTTTCTTATGTGCCTGTCCCT GTGCACAGCCTTTGCCTTGAGCAAACCCACAGAAAAGAAGAACGACCGTGTACATCATGAGCCT CAGCTCAGTGACAAGGTTCACAATGATGCTCAGAGTTTTGATTATGACCATGATGCCTTCTTG GGTGCTGAAGAAGACCTTTGATCAGCTGACACCAGAAGAGCAAGGAAAGGCTTG GAAAGATTGTAAGTAAAATAGATGGCGACAAGGACGGGTTTGTCACTGTGGATGAGCTCAAA GACTGGATTAAATTTGCACAAAAGCGCTGGATTTACGAGGATGTAGAGCGACAGTGGAAGG GGCATGACCTCAATGAGGACGGCCTCGTTTCCTGGGAGGAGTATAAAAATGCCACCTACGG CTACGTTTTAGATGATCCAGATCCTGATGATGGATTTAACTATAAACAGATGATGGTTAGAGA TGAGCGGAGGTTTAAAATGGCAGACAAGGATGGAGACCTCATTGCCACCAAGGAGGAGTTC ACAGCTTTCCTGCACCCTGAGGAGTATGACTACATGAAAGATATAGTAGTACAGGAAACAAT GGAAGATATAGATAAGAATGCTGATGGTTTCATTGATCTAGAAGAGTATATTGGTGACATGTA CAGCCATGATGGGAATACTGATGAGCCAGAATGGGTAAAGACAGAGCGAGAGCAGTTTGTT GAGTTTCGGGATAAGAACCGTGATGGGAAGATGGACAAGGAAGAGACCAAAGACTGGATCC TTCCCTCAGACTATGATCATGCAGAGGCAGAAGCCAGGCACCTGGTCTATGAATCAGACCAA AACAAGGATGGCAAGCTTACCAAGGAGGAGATCGTTGACAAGTATGACTTATTTGTTGGCAG CCAGGCCACAGATTTTGGGGAGGCCTTAGTACGGCATGATGAGTTCTGAGCTGCGGAGGAA CCCTCATTTCCTCAAAAGTAATTTATTTTTACAGCTTCTGGTTTCACATGAAATTGTTTGCGCT ACTGAGACTGTTACTACAAACTTTTTAAGACATGAAAAGGCGTAATGAAAACCATCCCGTCCC CATTCCTCCTCTCTGAGGGACTGGAGGGAAGCCGTGCTTCTGAGGAACAACTCTAATTA GTACACTTGTGTTTGTAGATTTACACTTTGTATTATGTATTAACATGGCGTGTTTATTTTTGTAT TTTTCTCTGGTTGGGAGTATGATGAAGGATCAAGATCCTCAACTCACACATGTAGACAAAC ATTAGCTCTTTACTCTTCTCAACCCCTTATATGATTTTAATAATTCTCACTTAACTAATTTTGT TTTATATTTAGAGAGAGAACACTTAGTCTTGCCTGTCAAAAAGTCCAACATTTCATAGGTAGT AGGGGCCACATATTACATTCAGTTGCTATAGGTCCAGCAACTGAACCTGCCATTACCTGGGC AAGGAAAGATCCCTTTGCTCTAGGAAAGCTTGGCCCAAATTGATTTTCTTCTTTTTTCCCCCTG TAGGACTGACTGTTGGCTAATTTTGTCAAGCACAGCTGTGGTGGGAAGAGTTAGGGCCAGT GAAAACTAAAGGAAAAATACAAGTGTTTTCGGGGCATACATTTTTTTCTGGGTGTGCATCTG TTGAAATGCTCAAGACTTAATTATTTGCCTTTTGAAATCACTGTAAATGCCCCCATCCGGTTC CTCTTCTTCCCAGGTGTGCCAAGGAATTAATCTTGGTTTCACTACAATTAAAATTCACTCCTTT CCAATCATGTCATTGAAAGTGCCTTTAACGAAAGAAATGGTCACTGAATGGGAATTCTCTTAA GAAACCCTGAGATTAAAAAAAGACTATTTGGATAACTTATAGGAAAGCCTAGAACCTCCCAGT AGAGTGGGGATTTTTTTTCTTCTTCCCTTTCTCTTTTTGGACAATAGTTAAATTAGCAGTATTAG TTATGAGTTTGCAGTGTTCTTATCTTGTGGGCTGATTTCCAAAAACCACATGCTGCTGA **ATTTACCAGGGATCCTCATACCTCACAATGCAAACCACTTACTACCAGGCCTTTTTCTGTGTC** CACTGGAGAGCTTGAGCTCACACTCAAAGATCAGAGGACCTACAGAGAGGGCTCTTTGGTT TGAGGACCATGGCTTACCTTTCCTGCCTTTGACCCATCACACCCCATTTCCTCCTCTTTCCCT CTCCCGCTGCCAAAAAAAAAAAAAAAGGAAACGTTTATCATGAATCAACAGGGTTTCAGTC CTTATCAAAGAGAGATGTGGAAAGAGCTAAAGAAACCACCCTTTGTTCCCAACTCCACTTTAC CCATATTTTATGCAACACAAACACTGTCCTTTTGGGTCCCTTTCTTACAGATGGACCTCTTGA GAAGAATTATCGTATTCCACGTTTTTAGCCCTCAGGTTACCAAGATAAATATATGTATATAAA CCTTTATTATTGCTATATCTTTGTGGATAATACATTCAGGTGGTGCTGGGTGATTTATTATAAT CTGAACCTAGGTATATCCTTTGGTCTTCCACAGTCATGTTGAGGTGGGCTCCCTGGTATGGT AAAAAGCCAGGTATAATGTAACTTCACCCCAGCCTTTGTACTAAGCTCTTGATAGTGGATATA CTCTTTAAGTTTAGCCCCAATATAGGGTAATGGAAATTTCCTGCCCTCTGGGTTCCCCATTT TTACTATTAAGAAGACCAGTGATAATTTAATAATGCCACCAACTCTGGCTTAGTTAAGTGAGA GTGTGAACTGTGTGGCAAGAGAGCCTCACACCTCACTAGGTGCAGAGAGCCCAGGCCTTAT

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# Table 4

GTCTCATAGCACATCAGAGATTTCACACAGGAAAGACGCCCTTTGTGTGCAGCGAATGTGGA AAATCCTGTAGGCTAGGTACGAGGCTTGGTGTTGAATTCGGCCGAGGCACAGGAGAAAAC CCTTTGAATGTAGTGAATGTGGGAAAGCCTTTACACAAAGCAAAAGCTCATTGTCCATCAAA GGACTCATACAGGAGAGAGCCCTATGGCTGTAACGAGTGTGGGAAAGCGTTTGCGTATAT GTCGTGTCTGGTTAAGCATAAGAGAATACACACAAGGGGAGAAACAAGAGGCAGCCAAGGTG GAAAATCCTCCTGCAGAGAGGCACAGCTCATTACACACCAGTGATGTCATGCAGGAGAAAAA CTCTGCTAACGGGGCGACTACACAAGTGCCTTCTGTGGCCCCTCAGACATCATTAAACATCA GCGGCCTCCTCGCAAACAGGAACGTAGTCCTTGTGGGACAGCCAGTGGTCAGATGTGCAG CCTCAGGAGATAACAGAGGATTTGCACAGGACAGAAACCTTGTGAATGCAGTGAATGTGGTT GTGCCTTCCGTGATCAATTATGTCTTATTTTATGTTACAGAAAACCCATAGGAAGAAACTCA GATCTATGTGGAAAAGGGTTGAGCAAAAATTTGTAGTTCATTATGTGGCCGAAAAGCATACA CTGAGAGAACATGTATAAGGCTGAGATAGCCTGATAAACTCCTATTAAAATGTATGCTGT GATACACAGGCAAATTTGATGTTAACCTAAGCACATACACAGCAATTGCTCGACTGTGTCAAT TAAATGAGTAAAGGAAGCCCAAGTACTTTTAAGTGGGAGGAAAATGACGTACCTGTGCAATC TTTTACAGCAGATGAGATAATTGCTGTTCCGGAGTGTTGCAGTGGACTGAAAAGCTTCATGA GGGGCATTGGTGGGGAAGGGGTAATCCTGTAATGGTGGCATGTGCGCACCTTTGTTTCACT CCGTTTCCTTAACCATGCCCCTGGGGGATATTGACACCCGACCTTCTTCGAATTGTTTGCGC GGGTTTGGACCCCTCTTCTCACCTTTTATTCAAAAACACCGCTTTCGTCGAAGAAAACCGCT CTTCCCCTAGAGGAACGCN >600

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GAGTCGACCCACGCGTCCGGGACGCTGGCGGCTCCGCGACGAGCTTTGTTTTTC GGTTGGGCATGCTGCTTACCGCAGGATGATGGAAGCGACGGCCCGTACAAAGACAGAAGC GTTGGTTTCACTGAGTCAGTGCTGATTCTCTCAAATAGAGCTTGAAGGATAAATCTTCATTTT TGTTTCAACAAACTTCGAAACAAATGGAAGAAAATAATCTACAGTGCAGTAGTGGTTGA CGGTAATTTTGAAGAAGTTCCCAGGGAGACGGCAATTCAGTTTAAACCTCCACTATACAGAC AGCGGTACCAGTTCGTTAAAAATTTAGTGGATCAACATGAGCCTAAGAAGGTTGCAGACCTG GGATGTGGTGATACTTCACTCTTAAGGCTGCTAAAAGTCAATCCATGCATTGAATTGCTTGTT GGAGTAGATATTAATGAGGATAAATTACGATGGAGAGGGGATTCGTTAGCTCCTTTCCTGGG GGATTTTCTGAAACCTCGGGATCTGAATTTGACCATCACATTGTATCATGGCTCCGTTGTGG AGAGAGACTCTCGTTTGCTTGGATTTGACTTGATAACGTGTATTGAATTAATAGAACATTTGG ATTCAGGTGATCTGGCCAGATTTCCTGAAGTGGTATTTGGGTACCTCGGCCCAAACTCGCTG AGCAGGCTGAGCGATATGATGGTATGGCTGCAGCCATGAAGGCAGTCACAGAACAGGGGC **ATGAACTCTCCAACGAAGAGAGAAATCTGCTCTCTGTTGCCTACAAGAATGTGGTAGGCGCC** CGCCGCTCTTCCTGGCGTGTCATCTCCAGCATTGAGCAGAAAACAGAGAGGAATGAGAAGA **AGCAGCAGATGGGCAAAGAGT** >606

# Table 4

AATAAAGAATAAAATAAAGATTGCATATGTACAATGCTATTCTTCCTTGGGAAAATGACAGAAT TATAAAGGATTTCAATGGGCTAATTTAATTTTTAATCTATATTTGCAGGATTTGCCATGTACGC AACATAGTATAACTTATAGTCAAGGATTAAAGGAAACTGCATTTTTTTCAATTACTTTAGGTAC CAAATCATATTAAGAACATTCAGTGTAAGGtaaaatagacctgAGGTATGTTATATGAGTGGGTAG GCATTTTCATTTAGTCAGTCAATTAAATCAACTTTCAAAGCAAGTGAAATTATATTCTTATACTA CAATGTAAAAAGTCTAACATACAAAATCAATGCTAAGAGTAACATTTTCTTGGAAATAACATTA CTTTTATAAATAAGCTGATGCAGATCAATTTCACATTTAATAACTTATAAAAAACAAAGTCAGTG TCTTAGAAAGGAAGATAAATGAACTTATCTTCCATATGCAATATGTAAATACGTTAATTCAGAC TAATTGTTCTATTTTTGTGTAGTATCTTTGTATAAACTAAGCATTTTTAATTGAACAGATTTCTA TTAAGTATTATCAAATTGTTTCTCTATGTACAAATCTAATTTTGTTGTGATTCAACAGAAAGTTT GTTTAGCATCACTTTTCAAGTGGTCCTTTTGCAAGAAACAAAAATATTAGCTTCTACTTAATAT ATACATCAGTCTTATAAACCATTTTATATTAGTCTTTTACAATACTCATTTGATGCTAGACATAC ATTAACAATATGCAGTAAGTTACAGAGTGTAAGACGTTATTTTACTAGTGTTATTAACGTGTA CCACCTATGATCAGGAGCAGCTTCATGTTTAAGAAGATAATGACAATGACAATGATTACTGTT ACAACAACTACCACTGCTTCTACTATCAACACATGACTTTTTGGGGGGAGGAAAATTCTACACT TTAAATTTCTTTACCGTATACATAAAACAATAACAGACATTCTGTTGACTTTGGCAAATAAACA AGTACACGTAAACAATTGTTTTATATAGTAGCTTAATTTCTATTTCTTTTCAAAATTATCTCAGT GTAATTAAAAACTGGGCAAATAACAGGAATTTAATTCTAAGGGTATTATAAATCTCAAGCAATA TTCATCTCTGAAAATAAGTTCACAGTCCAAAATCAAAGAAAATGCGATGTTCATTTTTAGGCG **ATCAACATTCCATGAGTCATAAATTATTTTGAAATGAGGAAAATTTCTAATGAATAAAAAA** AATAATATTGAAAGTACCTGCCCGGGCGGCCGGCCGAGGTACGAAATTGGGATGACATGAA ACACCTGTGGGACTACACATTTGGACCAGAGAAACTTAATATAGATACCAGAAATTGTAAAAT TTGAAACTTACCAGTTTTCCGGTGTATATGTAGCCATCCAGGCAGTTCTGACTTTGTACGCTC **AAGGTTTATTGACTGGTGTAGTGGTAGACTCTGGAGATGGTGTGACTCACATTTGCCCAGTA** TAGATATCTTATCAAGCTACTTCTGTTGCGAGGATACGCCTTCAACCACTCTGCTGATTTTGA AACGGTTCGCATGATTAAAGAAAAACTGTGTTACGTGGGATATAATATTGAGCAAGAGCAGA **AACTGGCCTTAGAAACCACAGTATTAGTTGAATCTTATACACTCCCAGATGGACGTATCATCA AAGTTGGGGGAGAGATTTGAAGCACCAGAAGCTTTATTTCAGCCTCACTTGATCAATGTT** GAAGGAGTTGGTGTTGCTGAATTGCTTTTTAACACAATTCAGGCAGCTGACATTGATACCAG **ATCTGAATTCTACAAACACATTGTGCTTTCTGGAGGGTCTACTATGTATCCTGGCCTGCCATC** ACGGTTGGAACGAGAACTTAAACAGCTTTACTTAGAACGAGTTTTGAAGGGTGATGTGGAAA **AACTTTCTAAATTTAAGATCCGCATTGAAGACCCACCCCGCAGAAAGCACATGGTATTCCTG** GGTGGTGCAGTTCTAGCGGATATCATGAAAGACAAAGACAACTTTTGGATGACCCGACAAGA GTACCAAGAAAAGGGTGTCCGTGTGCTAGAGAAACTTGGTGTGACTGTTCGATAAACTCCAA AGCTTGTTCCCATCATACCCGTAATGCTTTCTTTTTTCCTTTATTGCCAATCTTTGAACTCATT CAACTCCAGGACATGGAAGAGGCCTCTCTCTCCCCTTTGACTGGAAAGGTCAAGTTTTATTC TGGTGTCTTGGGGAAGCTTTGTTAAATTTTTGTTAATGTGGGTAAATCTGAGTTTAATTCAACT **GCTTCCCTATATAGACTAGAGGGCTAAGGATTCTGTCTGCTGCTTTGTTTCTTCTAAGTAGGC ATTTAGATCATTCCTGTAGGCTTCCTATTTTCACTTTACTGCTCTAATGCTGCTAGTCGTAGTC** CATTTCCTCTGTAATGTGGCGCTTTCAACTGTACTGCTGCAGCTTTAAGTACCTTAAAGCTTC CGGGGGGGGGGTAACAATGGGTGGTCTTCTGATTTTTATTTTTGAGGTTTTGTCAACTGGA GTACGTAGAGGAACTTTATTTACAGTACTTTGATTTGGCAGGTTTTCTTCTACTTGTGCTCTG CCTGGAGCTGTTTCCATATGATATAAAAAGCAAGTGTAGTATTCCATTACTATGTGGCTTAGG GATTTATTTGTTTTTTAAAATCAACCATGTTAGCTGGGATTAGACTCCCTACAGTCCTTCAATG GAAAAGTAACATTTAAAAATCCTTTGGGTAATTCAAATTACAGATTTAAAAGAGCTTAAGATCT GGTGTTTTGTTAATGCTTCTGTTTATTCCAGAAGCATTAAGGTAACCCATTGCCAAGTATCAT

## Table 4

TCTTGCAAATTATTCTTTTATATAACTGACCAGTGCTTAATAAAACAAGCAGGTACTTACAAAT AATTACTGGCAGTAGGTTATAATTGGTGGTTTAAAAATAACATTGGAATACAGGACTTGTTGC CAATTGGGTAATTTTCATTAGTTGTTTTGTTTTGATTTGAAACCTGGAAATACAGTAAAA TTTGACTGTTTAAAATGTTGGCCAAAAAAATCAAGATTTAATTTTTTTATTTGTACTGAAAAAACT AATCATAACTGTTAATTCTCAGCCATCTTTGAAGCTTGAAAGAAGAGTCTTTGGTATTTTGTAA ACGTTAGCAGACTTTCCTGCCAGTGTCAGAAAATCCTATTTATGAATCCTGTCGGTATTCCTT GAAATTGCATCACACTAATTACAAAATACAAGTTCTGGAAAAAATATTTTTCTTCATTTTAAAA CTTTTTTTAACTAATAATGGCTTTGAAAGAAGAGGCTTAATTTGGGGGGTGGTAACTAAAATCA AAAGAAATGATTGACTTGAGGGTCTCTGTTTGGTAAGAATACATCATTAGCTTAAATAAGCAG CAGAAGGTTAGTTTTAATTATGTAGCTTCTGTTAATATTAAGTGTTTTTTGTCTGTTTTACCTCA ATTTGAACAGATAAGTTTGCCTGCATGCTGGACATGCCTCAGAACCATGAATAGCCCGTACT AGATCTTGGGAACATGGATCTTAGAGTCACTTTGGAATAAGTTCTTACATAAATACCCCCAGC CTTTTGAGAACGGGCTTGTTAAAGGACGCGTATGTAGGGCCCGTACCTACTGGCAGTTGG GTTCAGGGAAATGGGATTGACTTGGCCTTCAGGCTCCTTTGGTCATAATTTTAAAATATGGG AGTAGAAAACAACAAAGAATGGAATGGACTCTTAAAACAATGAAAGAGCATTTATCGTTTGTC CCTTGAATGTAGAATTTGTTTTTGATTTCATAATTCTGCTGGTAAATGTGACAGTTAAAATGGT GCATTATGTATGTATATATAATTTAGAAATACCATTTTATAATTTTACTATTCCAGGGTGACAT AATGCATTTAAATTTGGGATTTGGGTGGAGTATTATGTTTAACTGGAGTTGTCAAGTATGAGT CCCTCAGGAAAAAAAAAAAAAAAATTCTGTTTTAAAAAAGCAATCTGATTCTTAGCTCTTGAAA CTATTGCTACTTAAATTTCCAATAATTAAAAATTTAAAATTTTAAATTAGaATTGCCAATACTT CTACATTTGAGAAGGGTTTTTTTTAGAAATACATTTaqtAAAGTcCcCaAGACATTAGTCTTACAT TTAAACTTTTTTCTTTAAAACATGgttTTGGtGGTTAACTTTTACACAGTTCTGAGTACTGttAATA TCTGGAAAGTATCTTGAqatatCaqtGGAAAGCTAAAcaqtCTAAATTAACATGAAATACttCATTTT GATTGagaaAATAAAATCagaTTTTTTCAAAGtcaaacc

NNNNNNNNATCGCACCATGGGACGTTCCTACGTACGCGCGAATTGAACATCTAAG CTGTTCCCCCACTCGAGCAGATCATACCAAGACCGCCGAAATTCGTATGCCAACATATCGA AGTATCAGTCGCGGACCGGACAAGCCCGGATTCGCCATGTACGGGCAGCTGTCCGGGCTG CTTTCGCCTCCGCCTGTGGATGCTGCGCCTCTCCGAACGCAACATGAAGGTGCTCCTTGCC GCCGCCTCATCGCGGGGTCCGTCTTCTTCCTGCTGCTGCCGGGACCTTCTGCGGCCGAT GAGAAGAAGAAGGGGCCCAAAGTCACCGTCAAGGTGTATTTTGACCTACGAATTGGAGATG AAGATGTAGGCCGGGTGATCTTTGGTCTCTTCGGAAAGACTGTTCCAAAAAACAGTGGATAAT TTTGTGGCCTTAGCTACAGGAGAGAAAGGATTTGGCTACAAAAACAGCAAATTCCATCGTGT **AATCAAGGACTTCATGATCCAGGGCGGAGACTTCACCAGGGGGAGATGGCACAGGAGGAAA** GAGCATCTACGGTGAGCGCTTCCCCGATGAGAACTTCAAACTGAAGCACTACGGGCCTGGC TGGGTGAGCATGGCCAACGCAGGCAAAGACACCAACGGCTCCCAGTTCTTCATCACGACAG TCAAGACAGCCTGGCTAGATGGCAAGCATGTGGTGTTTGGCAAAGTTCTAGAGGGCATGGA GGTGGTGCGGAAGGTGGAGAGCACCAAGACAGCCGGGGATAAACCCCTGAAGGATGT GATCATCGCAGACTGCGGCAAGATCGAGGTGGAGAAGCCCTTTGCCATCGCCAAGGAGTAG GGCACAGGGACATCTTTCTTTGAGTGACCGTCTGTGCAGGCCCTGTAGTCCGCCACAGGGC TCTGAGCTGCACTGGCCCCGGTGCTGGCATCTGGTGGAGCGGACCCACTCCCCTCACATTC TGGGTTTTTTTTTTTAATAAAAAAAAAAAAAAAAAGGGGACAATAAGAAAGGTACCCAAT TCGCCCTATAGTGAGTCGTATTACAATTCACTGGCCGTCGTTTTACAACGTCGTGACTGGGA **AAACCCTGGCGTTACCCAACTTAANN** >608

### Table 4

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NNCGCCGCCGGACCGCGCCCCACCCCGCGCGCCCGAGCAGGGCGACTGTCATTA GCTTCCTGGACGGGACCCGGGGCGGGATCCTGGTGTCCTGAAAGGGGCCCGGGCGACCC TAAGAGGAAGAACTTTTGGGGGCGGGGTCCCCGGTCCCCCTGGGCAGCCGCTAT TGTCTACGCGCCTCGCTGGGCGCGCGGGGGGGGCGTGATCGCGGCGCCCCGGGCTCTGG GTGCGGAGACCCAGGCGGGGCTGGGCCCAGGGCGGCGGGAGAAGCCGGGGAAGCC GAAGAGCCTGGGGAGGAGGAGCTGCGAGCGCGGGAGACGAGCAGGAGCCGCGCGGGCC GCGGCGAGCGCGATGCCGGCGGCGGCGGGGGACGGGCTCCTGGGGGAGCCGGCGCGC CTGGGGGCGCGCGCGGGGGGGGCCGGCCGGCGGCGGCGGGGAAG TTTCCTGCCTGCCTGGGTGAGCGGCGTGCCCCGCGAGCGGCTCCGCGACTTCCAGCACCA CAAGCGCGTGGGCAACTACCTCATCGGCAGCAGGAAGCTGGGCGAGGGCTCCTTTGCCAA GGTGCGCGAGGGCTGCACGTGCTGACCGGGGAGAAGGTGGCCATAAAAGTCATTGATAA GAAGAGAGCCAAAAAGGACACCTATGTCACCAAAAACCTGCGGCGAGAGGGTCAGATCCAG CAGATGATCCGCCACCCCAATATCACTCAGCTCCTTGATATTTTAGAAACGGAAAACAGCTA CTACCTGGTCATGGAGCTGTGCCCTGGGGGCAACCTGATGCACAAGATCTATGAGAAGAAG CGGCTGGAGGAGTCCGAAGCCCGCAGATACATCCGACAGCTCATCTCTGCCGTAGAGCAC CTGCACCGGGCCGGGTGGTCCACAGAGACTTGAAGATAGAGAATTTGCTACTAGATGAAG ACAATAATATCAAGCTGATTGACTTTGGTTTGAGCAACTGCGCAGGGATCCTGGGTTACTCG GATCCGTTCAGCACACAGTGTGGCAGCCCTGCCTACGCTGCACCTGAACTGCTCGCCAGGA AGAAATACGGCCCAAAATCGATGTCTGGTCCATAGGTGTGAACATGTATGCCATGTTGACC GGGACGCTGCCTTTCACGGTGGAGCCTTTCAGCCTGAGGGCTTTGTACCAGAAGATGGTAG ACAAAGAAATGAACCCCCTCCCCACTCAGCTCTCCACAGGTGCCATCAGTTTCCTGCGCTCT CTCCTGGAACCGGATCCTGTGAAGAGGCCAAATATTCAGCAGGCACTGGCGAATCGCTGGC TTAATGAGAATTACACGGGCAAAGTGCCCTGTAATGTCACCTATCCCAACAGGATTTCTCTG GAAGATCTGAGCCCGAGCGTCGTGCTGCACATGACCGAGAAGCTGGGTTACAAGAACAGC GACGTGATCAACACTGTGCTCTCCAACCGCGCCTGCCACATCCTGGCCATCTACTTCCTCTT AAACAAGAAACTGGAGCGCTATTTGTCAGGGAAATCTGACATCCAGGACAGCCTCTGCTACA AGACCCGGCTCTACCAGATAGAAAAGTACAGGGCCCCCAAGGAGTCCTATGAGGCCTCTCT GGACACCTGGACACGAGATCTTGAATTCCATGCCGTGCAGGATAAAAAGCCCAAAGAACAA GAAAAAAGAGGGGATTTTCTTCATCGACCATTCTCCAAGAAGTTGGACAAGAACCTGCCCTC GCACAAACAGCCCTCAGGCTCGCTTATGACACAGATTCAGAACACCAAAGCCCTCCTGAAG GACCGGAAGGCCTCCAAGTCCAGCTTCCCCGACAAAGATTCCTTTGGCTGCCGCAATATTTT CCGCAAAACCTCAGATTCCAATTGTGTGGCTTCTTCTTCCATGGAGTTCATCCCCGTGCCAC CGCCCAGGACCCCGAGGATTGTGAAGAAACCGGAGCCCCATCAGCCAGGGCCCGGAAGCA CTGGCATCCCCACAAGGAAGACCCCCTGATGCTGGACATGGTGCGCTCCTTCGAGTCTGT GGATCGCGACGACCACGTAGAAGTGCTGTCTCCCTCTCATCACTACAGGATTCTGAACTCCC CGGTCAGCTTGGCTCGCAGAAATTCCAGCGAGAGGACGCTGTCCCCGGGTCTGCCATCCG GAAGCATGTCGCCTCTCCATACTCCTTTGCATCCAACTCTGGTCTCTTTTGCTCACGAAGATA AGAACAGCCCCCAAAAGAGGGGGCCTGTGTTGCCCACCTCCGGTTCCCAGCAATGGCC CCATGCAGCCTCTGGGGAGCCCCAATTGTGTGAAAAGCCGAGGCCGGTTCCCTATGATGGG CATCGGACAGATGTTAAGGAAGCGCCATCAGAGTCTGCAGCCATCTGCAGATAGGCCCCTG GAGGCCAGCCTGCCCCACTGCAGCCCCTAGCCCCTGTGAACCTTGCCTTTGACATGGCCG ATGGGGTCAAGACCCAGTGCTAACTTGGGCCAGCGGGGTTTGGGGTATCTCTAGAAAACAG CAACTGAACAGAGCTCCACACATCTGTCAGGGTGTGAGCACTCCAAGGCCTCGCGTGGAGC ATCCTTAGTCCCACCTGTAGCTGAATCCACAGACCCAAAGCCTGCACAACCCCAACCTCGCTT AGGGACCCCAGAGATGCTGGAATCGCTAGGAGGGTTGGCTCCAGGGGCAGCCAATTCCT ATCATTCAGATCTTCCTTCCTCCAAGTACTCACCAACCCCTTCCACTTCCCACTTCCCCCAG GCTTGGGGGGAAAACAGGGCATGAGCCTTCTGGGGCACTCAGATTATGGACTGTTACCAGA TCTTTCTTCACGCTGTGCTACATGTGTGCCTCTCACAGCAGTTGGCCACAGTTACAGGGAGA GAACAATATCACAGTCATTCATCCAGGCCACGTTTCCTCTGCGGAGTGTAGCAGCCCTGCCT TTCATAGCAGGGATTACCTGAAGGCCAGCAGGAGCCGGGGGCAGGCCCAGGATCCTCAGA GGAAGATGGAGAGGAGCTTCGGACCAAGATCAAACCAAACAGTGGGGACCCCAACAGAAG AGAAAGACTGAAGGAGACACTCATTTCCCAAGCAAGATTTTGATAGATTTTTGTTGTTGTTGT TGTTGAAACATGCTAATGATTGAATTATCTTTTCCAAAGATTTTTTTAAATGTGATGTCGGTA AATTGAAATAACATAATTTTTTAAAACTTGGATGGAGAGATGAGAAGCAATTCCACCAAACTC ATGTTTTCACAGGAGGGTTCAGTGTGGAGAGCAAAAAAGCTGACTGTGGTGATTTGCTGAGT

GCTGTGGCCCACAGGCAGGCCAAGTCTCGGTGGCCCTGTGTTCATCCTGTTGTTTAAGGCA TAGCCCTGATCCTTCTGGAAGGCATAGAACACGGTTACAGCTGGTTCTGTAGAAAGAGGGGA AAAGATGATTGTGACAATTCAGAGCATAACTCAGATGGCGAGAAGGCAGCATTATCTCTGTG CGATGCTGATTTCAAGCTGCCCACAGAACTGGTGCGGCTCAGAGCTCGGCGAGTTTGCTGG GAGCTGGGAGCAGGCTTGCCTGGCAGAGAACCTGTTCAGATACAGGCCAGTTTCTTCTCG AGGAAAGCCAAGCTCCTCAAACAGGGTTCAGTCCACGTTGTGTTTTCACACCTTTCTCCAAG GATCGAACCAAAGATGTGTCTCCAGTATTGTGTCTCTGTGCCCCTGTGTGTTTTTTGTGGACAG CCGTGTTGTCTGACTGTATCCAGCTGGCACTTGACAGGGTGCAGTCATTGGTGAGAAGAAT CAGAAAAAGAAGACCCATCAGCACAGGTTGGATAGGGGTTAGTGTAGGAGACCAGTTACAG AATGGCCTGGAGTCTTCAACTTTTGACCGGTGCAGGTGTGACCAGAGACCACCTCTGTGGC CACCTCAGATAGTCATCTCAGTCCAAGGATCCCAAAACACAAATCTAGAATTGCAAAGCCAG CCTTTATTTCCCTGGCAGGCAGCCTTGCCAGAAGGCAGAGAGGCAGTTCTGAATCATTCTCT CATTCACCAGTGGTGACATCCTTCAGTCCCTCACATCTCTGACAGAGCGGGACAGAATGGAT ATTTGGCTGACCTTGGTGAGACCTGGAGCTGCCTGTTTCTTCCCTAGGGGATCACCACGGC TCTAGGGCATTCTAGGATGAGGTCAGACCCCTTGGCCATTGGTGTTATTTTTTGTATAGCTTC AGACTGGGTTCCAGAACTTACCATTGAAAACAGAGCTTTTAGGCCAGGTGTGGTGGCTCACA CCTGTAATCCCAGCACTTTGGGAGGCCGAGGCAGGTGGATCGCTTGAGCTCAGGAGTTCGA GGTGTGGTGGTACGTGCCTGTAGTCCCAGCTACTTCGGGGGACTGAGGTGGGAGGATCACTT GAACCTAGGAGGTCGAGGCTGCAGTGAGCCAAGATCATGCTACTGCACTCCAGCTTAGGTG GCAAAGTGAGACCCTGTCTCCAAAAAAAGAAAATAGAGCTTTATAAGCAGAGAGAAAAAT **AATCATCTAAGACCATCTCCCATTCGACATGAAGTGTACCTTTTCTAAAGACGGTTTCCAGC** TGCAACGGCTCCACTTTGCAGGCTTGCAGGGTGTATACCTGCGCATTGGGAACTTGCTGGA ACCCCTGATGCATTTTCCTTGAGAGCAGGGGTACTTCCGCCTTGCCGTTAGCTTGTGGAGAA CGTGCTTCTTATTCCTGGCAGGCTTCAAGAACAGCTGCACATGTGCCGCTAACTGACCGCGT TGCCATTGGCGACCTGGACTCTGAACTCAGGTTTATTCTAAACCCAGTGAGAGGTGAGGGG CTCGACTCTCCCTTTGGTAAGTCCGAAGCATGTTGTCTGTTCGACCGTGACTGTCTTCCTCA GTCTGTGCCTGTGATTCCAGTCACCCTGTAGTTACTGACAGAAATTGACTGGACTGTCATTG TTATGTCACCATTATTAGATATATGTACTTTTGTAATGACTGTGAAATACACTTTTCCCTCACT ACGACTGCTTCTTTATTTGCTGATAAATCTTAAAACAACTAAGTACGTTGCAAATAATAGTACA GGTACCATCTTTTATGTGAAGTTCTTTTTCTTTTTTGAGACAGGGTCTTGCTCTGTCACCCA GGCTGGAGTGCAGTGGCACAATCACAGTTCACTGCAGCCTCAACCTCTCCAGATTCAAGTG ATCCTCCCATCTCAGCCTCCCAAGTAGCTGGGACTACAGTTGTGCACCACAATGCCTAGCTA ATTTTTTTGTATTTTGTAGAAATGGGGTTTCGCCATGTTGCTCAGGCTGATCTCAAACTCCT GGGCTCCAACGATCTGCCCACCTTGGCCTCCCAAAGTGCTGAGATTACAGGCGTGAGCCAC TGTGCCTGGCCTTATGTAAAGCTCTTGACCTAGCATCTGACTGGAAACAAGCGGGAATTGCA TTGGGGGGCATTTTCTGGGCCAGTTTCCCTGCCTTATTTTACCTGCAATAGGTGTGCCTACA **AAAGTCTTTCTGACATACACACTGCAGGTGGCAGTTCAAGAAGAATCAACCTTTTTCATTTGG** GGATATTAGGATCTTCCTTGGAGACTCTGAAAATGGCACACAAAGAATGGCAGTTATGAACG TGACTTCTAGATTTTGTCCTTGTAGGAGGCCTTGGTCATGGATAGGGGAAGAGGGGATGATG GGATGGAATGGGAGGGTGGGATCTAGATGACCTCTTGAAATTGTCCCAGTTACTGCTTCCTT CATAACTGTTCACAAAACGTTTTTCATATATACCACCTTGTTTCCCCTGGGAAGTGAGGGGAC GAAGCCTTAGAGGGTGACATAGCTAGAAAGTGGAGAAGCTCACTGTTCACTGTGCAAAGCC CCAGTAGTCGGATTCCGGGGAAAAGAACAAGTATCTAGTTTTGATGACAATGTTTTCTTGTAA GAATCCCAACACTTTAGAATAGAAAAGGACCTAAGATTCTCTGGCTCAGCCCCAGCCTTTCT GAAGAAGGGAAAACTAGGGACCCAGATGGTTTAAGGACACCCCAGAGTCCCCAGATGAGCT GGCATTTGAGCTGGTCTGGAGCAGAGTTTCTCCCTCAAAGAACACAGAGAAATCAGAGAGT GGCTGCCATGGTCAGAGGGGGATGTCAACAACAGATCAAGCCGTCATCACAACAGGTATTT CTGAAGTTCCTGCAGGGACTAGGTCTTGCATTTTTAAGTCCTTTTCAAAACTGTGCAGCTTCC ACTCTGTCTTCTCAGTTGACTTCCCAAGTAAGCAGCAAACCCCTGGATAGCCTTGTTATCTA CTTTAGGTATTAAGAGGCTATTGGGTTTTACTAGATTAAATCAATAAAACATTTCCTATAGAGC CATATCATACACTGAAGCAAATTCAGAAAGAATGCAAAACTGCTATCTTTTGGGGGAGTCTG

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CCCAAACAGGTCTTTTTATTTAACATAAGGCCAAAGAAGCTATCAGGCGTTGCTGAATACTGT CCACTAACTGTACAAAATATTGACTGCATGCCTCGCAAACACCCAAAATATCCGCTGGAATGC CATAGAAATAAATAACTTCTGCTATAAACACATGAAAACATATCAAACTGTTATCTCTTTAAAC TTGAAATGCACTCATATAAATTAACAACTTTAATTACATTAGCCAAACAGACATTGGTTAAAGA TAGAAACAAACAACAACAACATCAACCACAGAACATAAAAAGTTTTAAAATAAAACAGGCT TCAGATTATCTTGGCTTTCATAATTATATTTTTCTTTTAAAGAAAAATATCAACCCATTGTCAAT GCACTGTTTTCAAAGCATTTAAATAGAGGGTAAAACCCTTTGGAAATTAATACAGAAGAAAT GATTCACTTTATGCATAAAAAATAAATAATAATATAGCTGAGACATGTGGTTTGCTTCTGCTCT TGAAGATGTGAACAGCTTCTAAGCATTCATTTTCTCTGACCCATACAACAGCTTCTCAGTGAT ACAGGGTTTAATTTAAACACATACAATGTCCACCCCCAAACCTTCTGCCCACATCTACAAGTT TTATTTATTTTGTGGGTTTTCAGGGTGACTAAGTTTTTCCCTACATTGAAAAGAGAAGTTGCC AAAAGGTGCACAGGAAATCATTTTTTTAAGTGAATATGATAATATGGGTCCGTGCTTAATACA ACTGAGACATATTTGTTCTCTGTTTTTTTAGAGTCACCTCTTAAAGTCCAATCCCACAATGGT GAAAAAAAATAGAAAGTATTTGTTCTACCTTTAAGGAGACTGCAGGGATTCTCCTTGAAAAC AACTCAGTGTGCTGAAATTCACCTGACTTTTTTGGAAAAAATAGTCGAAAATGTCAATTTGGT CCATAAAATACATGTTACTATTAAAAGATATTTAAAGACAAATTCTTTTCAGAGCTTCTAAGAT TGGTGTGGGCAGATTTTTAAGAGCCTAGAGTTTAGTCTTAGAGAAAGAGTGAGGAGATAGTA **AGGTTAGATAGAGCCACTGAGTTTCAAGAAAAAACATACTACTAAGAATCCCATATGTTATA ATTTAAAGCCTTTACTTTTGGCCTCATGCTGCTAGGTGAAAGAGTGGTTGTTCACAGGACTTG TATTTTCCAAGATGATTAAAGATGGTAAAATACTATCTTTCAATGTTATCAAAAAAATGGTAGCA ACTTATACTTCTATTTCAAAGCCATATAAATTTAACAAAATTTAAAGTTTGTGGGTGTTTGATAA** CCCAATCACTCAATATCCAATTAAAATATGGAATAAGTTTCAAATAAAATATGGAATTACATTT CTCTGCTTCTGATAACTGTGGTCACTAATCAACCCCCATGTTATCCCCGATATGTCTAGGACT TAGCTTAAAAAGATAGCAGATGTATTTGAGATGAGTGGGAACTATACATGGGTATCAGCTTTC TTGGTAAATTTCTGCTTTTTCCATGGCCTTGACCATCTTTGCTACTGCGCAGTGAACCAGGAC TTAATTTCTCACACTGTTTCTGCAGGTTCCGGTACCAAAGAAGATGCAGTTCAAAATACTGCC AGTTTTCCAAGAAATTTTGTAAAGTTGAACATGGCCATCTACTCTTGCCTTAAAACTTTTCTCA CCACACCCACCTTCCCACATGCATGATATCCAAGGTCGACAGACCTGGATTAGAATCCACTC TCAAGCTTCTCATGCAGTGCGTATTGTATTTTCTGCATAAGAAAGGGCTGCCTCTAGAACACA GTAAGTGTATTTGCCCAGTAGTGACATTGCCTACATATAGCCAAGTGTTATAGTATACCAACT TAGTATATTTTCAAGGAGAGCTAAACCACCTTTTGTAATGTTTGGTTTCTCACTGTTATCTTC CTTTCCTATAATTAATTTATTTTAATCTACAAATTGACATAGGGCTAAAAGCTTCAATATTTTAC AAAATATTAATTAATGTAATTGTTCCCAATTATTAGAAACTTTTTTCCATTTTTCAAAATGTTTG TTATTAGCTATTCCAGGCAAGCTAAGTACTAGAATAAACTAGATAAAAACTTGGCTTTAAGCA

TGTACTTTGATATTTATAAAACAAAGGTGTTTTTTTTTCATTTCTGCATCTGAATCAATACAAAT
TTACACATGAAGAATTTTGGCTGTAAATTAAAATTTTAGAGATTTTTACTACTGCCTCACCTC
TGCCTCCTCTTAACTGTTCTCTTCCTTACTCTCCCTCTTTAACACTTTCTCTCAAATTAATTAT
CTTTTAGTTAGTGATGACACTTATTTTTCCCAGCTGGTACAGGTAATATTTTCTCACAACCAAGC
CTTAATCATTTTTAAAAAATACACTCAACTCTAATTCTGGCCTAAATATTATTTTTCTGAAAAAG
CTTCTGATTTAAGATTGATTCCAATAGACACTAAGTTGGAAAAACATCAGCCCAGAGTTTTGA
TTATCATCCTGTTTTCCCCACAGGGGATAACTTGTAGAAGTGGGAGGGGCACAAAAAAGAGG
AGGAAATTTCGGACGCGTGGGTCGACTCCCTATAGTAGN
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ACGGGTCGGGGCCTCTCCCTCTCCCTGTCCCCACCCAGCGCAGCAGCCCTCCCCGCA GCTAGCAGCGAGGGCACCTTGTGATCATGTTAAAATTATGAATCTGATTTTTATGATGAT AAAATAAAAACCCACAAAAATGTTGAACCAAACCTCCCTGCTAATCTCCATGCCCACGTTCTT TCCCACCCTGTTCCCAGTCTTCTGACAAACTGTGTACATAGCGGACTCCTCCTTTCTCCTCC GAGGTGGTTTTAAAGGCTTTTTGGTGTATAGAAGTTTGTCCATTTGTAAAACTCCGGATTGCG TTCCTCCCGCCTTCCACCCCTTCCCTTAAAGTGATGGGCTTTCTCTTTTCTCTTTTA GTTTACCCGGTTTCTTTTTAAGTAATGTGGAAGAAAATGGTTTATTTTGTATTGTGGTATTGAA TATTGTGTTCCTTTTTATGAGGCAACCTGATTGTAAACTTCATGTAACTATAGACTGGAAAAAA CACCACCACCAACAACGCTTGTGAATGTATTTTTCTGTTAGCTGGGTTTACATGTGATGTTTT AGTGCTTTTGCAAGTTCAATTTGTTAGTTCCTGTATGAAAGATTGTGGGGGGAAAAATAAACGT CGTGCCGTTAGCTTTTTCCGTAATAACACCCTTCCTTCTGTAAATACCCGTTACCATATTTATC CATTTGTAATTAAATTATGGTATTAACTTGCTACAGAGGAAACAATATTTATAAAGAATGTTTC TTAACTATAAATATGTACAATTGTGGGCATAAACTGTTTCAGATTTTTATTTGAAGGTTTTAA GTGGTTTGATCATTTCTTGTGATGTTTTGAGAGTAATGCATACAGAAATATAATAAAATGTGTT GAAACTGCATGAACATAAAAAAAAAAAAAAAAAAAGTCGACGCGCCGCGAATTTAGTAGTA GTAGGCGGCCGCTCTAGAGGATCCAAGCTTACGTACGCGTGCATGCGACGTCATAGCTCTT **CTATAGTGTCACCTAAANNNN** 

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NNGCAGACAGTGACTTCGATGCTAAGAGCAGTGCGGATGATGTAATAGAAGAAACT AGAGTGAACTGCAGAAGGGAAAAGGTCATAGAGACCCCTGAGAATGACTTCAAGCACCACA GGAGTCGTAACCACTCTCGTTCACCTAGTGTAGAAAGAGGGCAACAGTACGGCAAGAAGAA GAATGAGAAAAGAGGGCTGCTGCGCTGGAAGCATGTTTGGATGTAACCAAGCAGAAAGATC TCAGTGGATTTTATAGGCACCTATTAAATCAAGCAGGTGGTGAAGAGGAAGTACCTAAATGC AGCTTTCGTGAAGCCAGATCTGGTATAAAGGAAGAAAAATCAAGGGGCTTCTCCAATGAAGT AAGTTCAAAAAACAGAATACCACAAGAGAAATGCATTCTTCAAACTGATGTGAAAGTAGAGGA AAACCCAGATGCAGACAGTGACTTCGATGCTAAGAGCAGTGCGGATGATGAAATAGAAGAA ACTAGAGTGAACTGCAGAAGGGAAAAGGTCATAGAGACCCCTGAGAATGACTTCAAGCACC CACGAAAGGATCACGAACGTCGAGAGGGACATGAGAAAAGGGAAGATCAGCACCAGCAGAA ATAGGCACAGAGAGGCCAGTCATAGAGATTCCCATTGGAAGAGGCATGAACAGGAAGATAA ACCAAGGGCGAGGGACCAAAGAGAAAGAAGTACAGAGTATGGAAAAGGGAGAAAGATAG GGAGAAATATTCCCAAAGAGAACAAGAAAGAGATAGACAACAAAATGATCAGAACCGACCCA GTGAGAAAGGAGAGGAAGAGAAAAGCAAAGCAAAGGAAGAGCATATGAAAGTAAGGAA CTTCAGAAAGAAATCAAGACAGAAAGGAAAGCAGCCCAAATTCTAGGGCAAAGGATAAATTT GAAACCCTCTAATTCTGAATCATCACTGGGAGCAAAACACAGACTCACAGAGGAAGGGCAA GAGAAGGGTAAAGAACAAGAGAGACCACCTGAGGCAGTGAGCAAGTTTGCAAAGCGGAACA ATGAAGAAACTGTAATGTCAGCTAGAGACAGGTACTTGGCCAGGCAGATGGCGCGGGTTAA TGCAAAGACCTATATTGAGAAAGAAGATGATTGATGGCTACCCCAAGAGAAAGATTTAAGGA

## Table 4

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CGACCCACGCGTCCGCCCTGAGCCGGCGGAGGAGGACAAAAACCGCCGCGACCC CGGCAGGGTGGGAAGTGCAGGGCAGCGCTCCCAAGACACGCTTGTTGGAGGTTCGGGCCT GGGTGCTTGGTTGTCTGAGCCTCCTTTTTTGTGTTTGCCTGGGTCCCTCGTGGCCGACGGA ACAATGAAGGATTGCAGTAACGGATGCTCCGCAGAGTGTACCGGAGAAGGAGGATCAAAAG AGGTGGTGGGGACTTTTAAGGCTAAAGACCTAATAGTCACACCAGCTACCATTTTAAAGGAA AAACCAGACCCCAATAATCTGGTTTTTGGAACTGTGTTCACGGATCATATGCTGACGGTGGA GTGGTCCTCAGAGTTTGGATGGGAGAAACCTCATATCAAGCCTCTTCAGAACCTGTCATTGC ACCCTGGCTCATCAGCTTTGCACTATGCAGTGGAATTATTTGAAGGATTGAAGGCATTTCGA **GGAGTAGATAATAAAATTCGACTGTTTCAGCCAAACCTCAACATGGATAGAATGTATCGCTCT** GCTGTGAGGGCAACTCTGCCGGTATTTGACAAAGAAGAGCTCTTAGAGTGTATTCAACAGCT TGTGAAATTGGATCAAGAATGGGTCCCATATTCAACATCTGCTAGTCTGTATATTCGTCCTAC ATTCATTGGAACTGAGCCTTCTCTTGGAGTCAAGAAGCCTACCAAAGCCCTGCTCTTTGTAC TCTTGAGCCCAGTGGGACCTTATTTTTCAAGTGGAACCTTTAATCCAGTGTCCCTGTGGGCC ACGGCTCATCTCTTTTTGCCCAATGTGAAGCAGTAGATAATGGGTGTCAGCAGGTCCTGTGG CTCTATGGAGAGGACCATCAGATCACTGAAGTGGGAACTATGAATCTTTTTCTTTACTGGATA **AATGAAGATGGAGAAGAAGAACTGGCAACTCCTCCACTAGATGGCATCATTCTTCCAGGAGT** GACAAGGCGGTGCATTCTGGACCTGGCACATCAGTGGGGTGAATTTAAGGTGTCAGAGAGA GCTCTGGTACAGCCTGTGTTGTTTGCCCAGTTTCTGATATACTGTACAAAGGCGAGACAATA CACATTCCAACTATGGAGAATGGTCCTAAGCTGGCAAGCCGCATCTTGAGCAAATTAACTGA TATCCAGTATGGAAGAGAGAGAGCGACTGGACAATTGTGCTATCCTGAATGGAAAATAGAG GATACAATGGAAAATAGAGGATACCAACTGTATGCTACTGGGACAGACTGTTGCATTTGAAT TGTGATAGATTTCTTTGGCTACCTGTGCATAATGTAGTTTGTAGTATCAATGTGTTACAAGAG TGATTGTTTCTTCATGCCAGAGAAAATGAATTGCAATCATCAAATGGTGTTTCATAACTTGGT **AGTAGTAACTTACCTTACCTTACCTAGAAAAATATTAATGTAAGCCATATAACATGGGATTTTC** CTCAATGATTTTAGTGCCTCCTTTTGTACTTCACTCAGATACTAAATAGTAGTTATTCTTTAAT AAAATTTCATAGGTTACATTTCCTGCAGCCTATCTTTATCCACAGAAAGTGTTTTCTTTTTTTA **AATCAAGACTTITAAAACTGGATTTCCTCCCATCACTGTTTTTTGAAGGTCCTCCAAGTCCGT** GTTAAGGTAAATATCTGTTTTCTTCCTGATGTCACAGCCTGAGCATACTCTGTGCATTAGGAA

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### Table 4

GCGACTACAAGACTGAGGGTCTTGTGCCTTATAGATCTTTGTATCCCCCATGGCTGACACAT AGTAGGTACTCAGTAAATGGTTTTATAATGAATCAGTGAACATTTTGCTTCTATAGAAGTGTA GATTTACCTTATATTGTCTTTATTTTCCATGAGCTACTAAGTCATTAGAGATACTCTGAAGCAT AGTTAGTTTAGGAAATCACTTCATATTGATTGTATTAGAATTATCTTGGAATTGAAGATATATC CCTAGAGCAGGGACCCCAACCCCCAGGCCATGGGCCACACAGCAGGAAGAGGTGAGTGG TGGGCCATTGAGGAGCTTCATCTGTATTTATGGCTACTTCCCATCACTCGAATTACCACCTGA ACTCCACCTCTTGTCAGCTCAGTGGCAGCATTAGATTCTCATAGAAGCACAAATCCTATTGTG AACTCTGCATGCAAGGGATCTAGGCTATGCGCTCCTTATGAGAATCTAATGCCTGATGACCT GAGGTGTAACAGTTTCATCCTGAAACCACCCTTCACCCTGCAGTCTGTGGAAAAATTGTCTT CTTTTTTTTTTTTTTGGTAGAAAACAAAGAGGCATACTCTGATTTTTATACTCTGTTTTTTGCA GGTGCTCTTTCTTTGAATGGAGATTTGATGAGCAAGTGGTTAGGATGCAGGGAGAGCTACT ATGGGTGATATTTTCCTTGTTTAGGAGCTGTGAGTTAAAATTGTATCCTTTCTGGTTTATCTAA GGAAAGTCAAATCTTGACAGAAAACATTTTTCCTTGGAAGGTCAACTCTCAGACATTGTATTT TGGTTTCCCTCAGTCCTCATAACTTCCTTCTTGCTGAACATATTTTATTCTCTTTTCAGAGAAG GAAAATAAAAAGGATTCTAAAAGTTTGATGCATTGGAAAAATTTCCTTGAGGCATTTAGCAAC ACATAGAAAATGGGCTTTGATTCTTTTCCAAAACTTTTAGCCATAGGGTCTTTTATAGACAGG GATAGTAAAATGAAAATTGAGAAATATAAGATGAAAAGGAATGGTAAAAATATCTTTTAGGGG GCTTTTAATTGGTGATCTGAAATCTTGGGAGAAGCTGTTCTTTTCAGGCCTGAGGTGCTCTT GACTGTCGCCTGCGCACTGTGTACCCCGAGCAACATTCTAAGGGTGTGCTTTCGCCTTGGC TAACTCCTTTGACCTCATTCTTCATATAGTAGTCTAGGAAAAAGTTGCAGGTAATTTAAACTGT ACACATTTTATACTTTGCATCTCCAAATTTATTGCGGCGAGACTTGTCCATTGTGAAAGTTAG AGAACATTATGTTTGTATCATTTCTTTCATAAAACCTCAAGAGCATTTTTAAGCCCTTTTCATC AGACCCAGTGAAAACTAAGGATAGATGTTTAAAAACTGGAGGTCTCCTGATAAGGAGAACAC AATCCACCATTGTCATTTAAGTAATAAGACAGGAAATTGACCTTGACGCTTTCTTGTTAAATA GATTTAACAGGAACATCTGCACATCTTTTTTCCTTGTGCACTATTTGTTTAATTGCAGTGGATT **AATACAGCAAGAGTGCCACATTATAACTAGGCAATTATCCATTCTTCAAGACTTAGTTATTGT** CACACTAATTGATCGTTTAAGGCATAAGATGGTCTAGCATTAGGAACATGTGAAGCTAATCTG CTCAAAAAGATCAACAAATTAATATTGTTGCTGATATTTGCATAATTGGCTGCAATTATTTAAT GTTTAATTGGGTTGATCAAATGAGATTCAGCAATTCACAAGTGCATTAATATAAACAGAACTG GTGGCACTTAAAATGATAATGATTAACTTATATTGCATGTTCTCTTTCCTTTCACTTTTTTCAGT GTCTACATTTCAGACCGAGTTTGTCAGCTTTTTTGAAAACACATCAGTAGAAACCAAGATTTT AAAATGAAGTGTCAAGACGAAGGCAAAACCTGAGCAGTTCCTAAAAAGATTTGCTGTTAGAA ATTTTCTTTGTGGCAGTCATTTATTAAGGATTCAACTCGTGATACACCAAAAGAAGAGGTTGAC TTCAGAGATGTTCCATGCTCTCTAGCACAGGAATGAATAAATTTATAACACCTGCTTTAGC CTTTGTTTTCAAAAGCACAAAGGAAAAGTGAAAGGGAAAGAGAAACAAGTGACTGAGAAGTC TTGTTAAGGAATCAGGTTTTTTCTACCTGGTAAACATTCTCTATTCTTTTCTCAAAAGATTGTT **GCAAGAAAGCAGAGCGTAAACATCAGCTAGATGGTAACATGCAATNTCAGCTCTCTTGAAGA CATGGGAAACCTAAGNN** >620

NNAGTGTATTTATTAACATGACTAATATTTCATATTTTATTTTGTTAGAAGATTAATTTG
TAATCATTGTACCCTGTAGATTTTGAAACAATTTTACTAGAAATTACTAATGCTGGTTCTTGAG
TAACCTAAAAAATTGTATTTACTCAAATTTAGAATGCTATTTATAGTTCTAAGCAGTTAGATGA
AATATTCTGATTATTCTAAAGTTGCTTTGGTACAAAATTTAGAATAAAGCCAAAACTGGCAGCAC
CACAACAAATGTGATCCTTTCACAGCAGGTCTAAAGACCCTCAGAGGCAACAAAGCATAAGT
TAAAACACACATAAATAAGAGCCATTCTCCTGACAATTTTCTTACATCATTAAAAAAGAGAAATA
AAATCCACATTCAGTAAGTTATACTGGAGGCCCAAATTTCATGCTCCATGTAATTATTCCTCA
ATGATAGTGTAAAAAAATGCTTATTATTGCTAACTGATGTCTAATTCATGGTTCAGGATGCTTCA
ATCATGAGGCCCAATGATTAGAGTGTACATTTTAATGTTTAGTCCACCTGATACTTGACATACAACA
AACTGCACATACTTAAAGTGCACAATTTGATACACAGTCTTTTAAACAGCATGAAAAAGTGCCT

GATAACTTAAAAATGAAAAAAATTTCAATTTACACATATTATTTTAAAATAGTACATTCTAATTT AAGAGCCAAATTTACTCAGAAGGTTTAGAAACACCAAAATTAACAGCCAGTTTTCTTGATTTT CTTCTTGAAGAAGAGATTGGTGTGACTTATGGTGAGATATACTATGGCCTTGAGAGGCAGT TTCAACTTGAAAAGAAGATGCAGGTTGAGCAATCGGAGAGGACTTCAAAGAAGCTGATGAGC CCTGCAGAGGTATAAACTGATTGTGCACACCCCCTGGTATTCCCCCAGCCATGGGCATGGT CCCAGAATATAAAGTATGATGGAAGGGCTTCCCAGGAACTGGCACCGATGGTCCCCATGGC ATTGAGCCAAAGAGATGAGACGACGAAGGCATTATATTAGCTGTTGGTGGGGCCAAGGAAA ATTTTTCTTTTAGTATAATGGTATCATCAAAGCTCTGAAATTTGAGACCTCCTTCTGCTAGCCT CTTACAACATTCAACCTCAGGGATCCTTTCCTAGGGACTGTGTGGGACTATCCACACGGAAT **GGAATTTATCATTATACTGGGCCTGAAAAGGGAGGAATACTACTACTTAATATCATATGCTGA** TACAAGGTTTAGGGGGNTATTTGCAATTATATTTATAAAAAAANTAAAGGGGGCAGAAAACCG NCCCCNGTGAGGNGGAAGCNNN

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NGCCTTGGTGGCCATAGGCTTCTCTTTAACCAGGAAAAAGATATGCATGTGCTGTAA GTCCCTAGGTGCAAGCTTTTTCTTGTTATGTTTTAAACAGCTTTATAAACTATTGTTCATAGAA GATATTATGTACATTTATTTCAGATAAAGGACAATAAGTTTACTTTGTATCTGAACTCAAAACA AAGTAGTTGTATATTTTAACATTCAAAATTGGGATTTCCCAATGTGACACATCATGAATGCAAA CCCCTCCAGCCCATCAGACGCCAGGCTGCCTACTGGTAATCTGTGTATAGTATATAAACATG GTTCTTCATTGCTTTTCTGTTCACAGTTGTGGCTCTGTTTTTTAAGAATGTAACTTGTTTTTAG ATTATACTTGCATCTGTGACTTTACTACCAGCCACGTTGACACAAAACAGGTTCTGGTTCAGG TAAAGTTGCGTCAGTCACCTGCAGCAGAAATCCCTCTTCATTCCTCTTCTCTGTGTTCATTCC TCTTCTGTGCTGTTCTGAAGCTTCTACCAATACTCTTTCCATATTGTCTTTTTCAGTGAAGAGA **AATGCATTCAAGATTAGGTCCCTCCTGTCTATCCAGTTTCAGGATTTTATGTTGTTTTATACAC** AGTTATTTCAGTATAGAAACTGGCTTTATTGCCAAGTGTTTTTTTAAACATGTTTTAAACTCTCA TATGAGCAAACTGTCCAACTTCAGTTTTTCATAAGATTAAACTTCTTACGATCAAATTTGTCTC TTGCAATGATGTGATGAGTTGCCAAATAATTGAGATTATTTTAAAATGTTTTGTTCATATTCTT **TGA** >623

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ACGCGGGGAGACACACACCCTCTGCCCACCTCTGCTTCCTCTAGGAACACAGG AGTTCCAGATCACATCGAGTTCACCATGAATTCACTCAGTGAAGCCAACACCAAGTTCATGTT CGACCTGTTCCAACAGTTCAGAAAATCAAAAGAGAACACATCTTCTATTCCCCTATCAGCAT CACATCAGCATTAGGGATGGTCCTCTTAGGAGCCAAAGACACACTGCACAACAGATTAAGA AGGTTCTTCACTTTGATCAAGTCACAGAGAACACCACAGGAAAAGCTGCAACATATCATGTT GATGCATATGAGCTGAAGATCGCCAACAAGCTCTTCGGAGAAAAAACGTATCTATTTTACA TGCTCCAGAAGAAAGTCGAAAGAAGATTAACTCCTGGGTGGAAAGTCAAACGAATGAAAAAA TTAAAAACCTAATTCCTGAAGGTAATATTGGCAGCAATACCACATTGGTTCTTGTGAACGCAA TCTATTTCAAAGGGCAGTGGGAGAAGAAATTTAATAAAGAAGATACTAAAGAGGAAAAATTTT GGCCAAACAAGAATACATACAAGTCCATACAGATGATGAGGCAATACACATCTTTTCATTTTG CCTCGCTGGAGGATGTACAGGCCAAGGTCCTGGAAATACCATACAAAGGCAAAGATCTAAG CATGATTGTGTTGCTGCCAAATGAAATCGATGGTCTCCAGAAGCTTGAAGAGAAACTCACTG TTACCTCGGTTCAAAGTGGAAGAGAGCTATGACCTCAAGGACACGTTGAGAACCATGGGAAT GGTGGATATCTTCAATGGGGATGCAGACCTCTCAGGCATGACCGGGAGCCGCGGTCTCGT GCTGCCACCGCTGTAGTAGGATTCGGATCATCACCTACTTCAACTAATGAAGAGTTCCATTG TAATCACCCTTTCCTATTCTTCATAAGGCAAAATAAGACCAACAGCATCCTCTTCTATGGCAG ATTCTCATCCCCGTAGATGCAATTAGTCTGTCACTCCATTTGGAAAATGTTCACCTGCAGATG TTCTGGTAAACTGATTGCTGGCAACAACAGATTCTCTTGGCTCATATTTCTTTTCTCATC TTGATGATGATCGTCATCAAGAATTTAATGATTAAAATAGCATGCCTTTCTCTCTTTCTCT TAATAAGCCCACATATAAATGTACTTTTTCTTCCAGAAAAATTCTCCTTGAGGAAAAATGTCCA AAATAAGATGAATCACTTAATACCGTATCTTCTAAATTTGAAATATAATTCTGTTTGTGACCTG TTTTAAATGAACCAAACCAAATCATACTTTTTCTTTGAATTTAGCAACCTAGAAACACACATTT CTTTGAATTTAGGTGATACCTAAATCCTTCTTATGTTTCTAAATTTTGTGATTCTATAAAACACA TCATCAATAAAATAGTGACATAAAAAAAAAAAAAAAA >628

>629 **AAGGCTACCCCTAGAAGAAGCAGGTCTAGAAGAAGTAGTATGGTCTTCGAGTAGCCTTTCAG** TTCCCCACCAGAAGCTGGCAACAACCAGATAAAAACAGTTCTTCCGAGCAGTGTTTTCTA ATACAAAGGGAAGATTCTACCTCTGAGTCTGAGGATGACTCTCGGGATGAGAGCCAGGAGA GTTCAGATGCTTTGCTGAAAAGGACCATGAACATCAAGGAGAACAAAGCCATGCTTGCCCAG TTATTGGCGGAATTGAACTCGATGCCAGATTTCTTCCCAGTACGAACCCCAACCTCAGCTTC TAGGAAGAAGACAGTGAGGCGGGCCTTCTCGGAGGGACAGATCACGCGGCGTATGAACCC AACCCGGAGTGCGCGCCTCCTGAGAAGTTTGCTCTAGAGAACTTCACTGTCTCAGCCGCT AAATTTGCGGAAGAGTTTTACAGCTTCCGAAGAAGGAAGACAATTGGGGGGAAATGCCGGG AGTACAGACGACGTCACCGTATATCTTCTTTTCGGCCAGTGGAGGATATCACCGAAGAGGAC TTAGAAAATGTTGCCATAACTGTTCGAGATAAAATCTATGATAAAGTTCTGGGTAACACGTGC CATCAGTGTCGACAAAAGACCATCGACACCAAGACAGTGTGTCGGAACCAGGGTTGCTGTG GTGTGCGAGGACAGTTCTGTGGACCATGCCTGCGGAACCGCTATGGGGAGGATGTCAGAT CGGCATTGCTGGACCCGGATTGGGTGTGTCCCCCCTGTCGTGGGATCTGCAATTGCAGCTA CTGTCGGAAGGGGGGGGGGGGCGCAGAAGACACAAACTGGAAGAAGGTTGACATAGGA CAACAAACATGCATACCATTGGTGCCTAAGATTTTTTTACAGTTGTTTTTTATACAGAAATTC TTTGTAGAAATTACTATTTTTTGTTAAAGATTGTTTATATGCTTACAAAGATTTCTCAGGAAGA **AAAAATATCTGCCAGTTATTAAAAAGCACAGTTTAAATGGGGTGGGGTTAAAGTTCAGGTAAG** CAGTAACTCACTCCAGGCCAAGTGTGCCTTAGCACGAGTGACCACAGTTTAATAGACCACAC ACATCGTTTAACCTGCTCTTGGTCATTGGAAATTTACACTGAACAAAGTGCAATTAACTGTAG AACAGTTTTATTTTATTAAAACTTGACTGAACAAAAGGGGACCATCAACATTGTAGACACTG

### Table 4

GAGGCCTTACAGAGTGCTAGCCTCTTCCTTCAGGACTCACCTGGGGCCTGCTGCTTTTATAT TTTGAAAGAGTTTAANNN >630

NACCAAGTATAAATTACAACCCTCCTCCTTACTATCAACGCGCCAACCCCT TTTTTTTTCCTTTAATAACGACAATTTTCATTTTTTAGGGTTCAGTTCCAGCTGATTTTATTT CCTTCTCAAAAAAAGTTATTTACAGAAGGTATATATCAACAATCTGACAGGCAGTGAACTTGA CATGATTAGCTGGCATGATTTTTTCTTTTTTTCCCCCCAAACATTGTTTTTGTGGCCTTGAATT AAAACCCTTAACGGAACTGCCTTAAAAAGGCAGACGTCCTAGTGCCTGTCATGTTATATAAA CATACATACACACAATCTTTTTGCTTATTATAATACAGACTTAAATGTACAAAGATGTTTTCCA CTTTTTCAATTTTTAAACACACACAGCTATAAACCTGAACACATATGCTATCATCATGCCATAA GACTAAAACAATTATATTTAGCGACAAGTAGAAAGGATTAAATAGTCAAATACAAGAATGAAA CACGTTTTTGCTTATAAAAAAAGTGCAAAAAAGATGTGGTTTACAAGTTAAAGCTACAGAATC CCTTTTGCTGTAATTGCACCAGTTTTAAAGCCTCTGGACAGAGCAGTATTTCGTTTAAAACT TTGTTTTCTTAAAAGCTTACAGTGTTTGGCTAATTCTCCTCCCCTTTTTACAAGACGGGGGC CGGAGGTGGACACTGGTGGCAGGTTAAGGGATACTGTCACTTTAAGAAGCCTGCAGATTG **AAGTGTAAACATGGAGAAATTAGGGGCTGATTTTTTAAACTGTGTGAGATATTAACCAGCCG** CCCTGTTATAAAATCAGGAAATCCAAACAGCGATTTACACCGATTAACACCCCCTTTATATAT TTTTTACAAAAATACACTGAGAAAATAATCAAACGTTTTCATCTCTCTTGTCTTTTTTTGTTTTT TAAAAGTGTCAAAAGTCTACATTTAAATATAAAAAATTAAAAGTTAAAACTCTAGCCCTTCAGT **ACAAAAGAAAAATATGTTTGGCCAGTATAAATACGTCCACATATAAAATGGCATCTGATTAC ATTTACACCTATAAGGAATAAACACACACACTGAGAAAAAATTTGGTCCTGAATTGTTTTTTT** TAAAATCCAGCACAGATTTGAGTTGCGTTTGAATCCTTTAAAGAGTTAAGAATGAAAN >631

**ATTAGCAGGTATGCAAAGAAGCCTTTTCACCCTGATGTCCTTAGAGATAATATGGATCAGTCC** AGAGTTCTCCTCTGGGTGAAAGCAGAACCCTTTATAGTGGGTGCCTTGCAGGTCCCCCCTC CATCCAAGTTTAGTCTTCACTATCTCAGGAAGATATCCACCTATGTGCAAATCCGGGCCACA GAAGGAGCTTACCCGCGCCTCTACTGGTCTACATGGAGGCACATCGCTTGTGGGAAGCTGC AGTTGGCCAAGGACCTGGCGTGGCTTTACTTCGAAATATTTGATAGTCTTTCAATGAAGACA CCTGAGGAGCGCCTGGAATGGTCTGAGGTTCTGTCCAACTGCATGTCTGAGGAGGAAGTTG **AAAAGCAGAGAAATCAGCTTTCAGTGGACACGCTACAGTTTCTGCTCTTCTTATACATTCAAC AGTTGAACAAGGTCTCCCTAAGGACATCTTTGATTGGCGAAGAGTGGCCCAGTCCCAGAAA** CAAATCTCAGTCTCCTGACCTGACTGAAAAATCTAATTGTCATAATAAGAACTGGAATGATTA CAGTCACCAAGCTTTTGTCTATGATCATCTGTCTGATCTCCTCGAGCTGCTTTTAGATCCAAA ACAACTCACTGCATCATTCCATCCAACCCATAGTAGTCTAGTGTCTCGAGAAGCTGTTGTGGC **GCTCAGCTTCCTTATTGAAGGTACAATAAGTAGAGCCAGGAAGATCTATCCACTTCATGAACT** TGCACTGTGGCAACCACTGCATGCAGATAGTGGCTTCTCAAAGATCTCTAAGACTTTCTCTTT CTACAAACTGGAAACCTGGTTGAGGTCCTGTTTGACTGGGAATCCATTTGGTACATCAGCTT **GCCTCAAGTCTGGAAAGAAATTGGCTTGGGCTCATCAAGTTGAAGGGACCACCAAAAGAGC** TAAGATTGCTTGTAATACTCATGTGGCCCCTAGGATGCACCGACTGGTAGTGATGAGCCAGG TTTACAAGCAGACACTGGCTAAGAGCTCAGACACTCTGGCGGGGGCACATGTAAAGATTCAT CGTTGCAACGAATCTTTTATATATCTGCTCTCTCCCTTACGATCTGTGACAATTGAGAAGTGC AGGAATAGCATCTTTGTCTTGGGCCCTGTAGGGACTACACTTCACCTCCACAGTTGTGACAA TGTTAAAGTCATTGCTGTTTGCCATCGTTTGTCCATCTCTACAACAGGTTGCATCTTTCA CGTTCTTACGCCTACACGCCCACTTATTCTCTCTGGGAACCAGACAGTAACTTTTGCCCCTTT TCATACACATTACCCAATGCTAGAGGACCATATGGCCAGGACTGGCCTTGCTACAGTGCCTA ACTATTGGGATAATCCAATGGTTGTGCAGAGAGAACAGCGACACAAGAGTCTTCCAGCTT TTACCACCTTGTGAATTCTATGTATTTATTATTCCCTTTGAAATGGAAGGGGACACAACAGAG ATACCCGGGGGTCTTCCATCTGTATATCAGAAAGCACTGGGTCAAAGAGAACAGAAGATACA GATCTGGCAGAAAACTGTGAAGGAGGCTCATTTGACAAAGGATCAAAGGAAGCAGTTCCAG GTACTGGTAGAGAACAAGTTTTATGAATGGTTGATTAATACAGGACATCGCCAACAGCTGGA

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# Table 4

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TGGCCCGGCGGCGAGGAAAAAGGCAGTTTTGAAGCATTTAGTGGCAAAAGGGGTAGGAG ACGCTGCTGAAGTGTCTACTACATTCAGGGGACCTGGAAGGCTTCCAGATATCCGCAATG AACAATGAAAAGAAATTGTGAAAGAAGGCGCTTCCCTCAAGCCGGAACTAATGAACTCCTGG GTCACGTGGTGCGCACGCGCCAAAGGCACACGATAAAGGAAAACGCGGGCTTATCGTGGC CTTTAAAATCCGGCTTGGTGAGCTTGGGTCGCCTCTGAAGGAGAACCATTTTCCATCTCTTT CATAGTTTTTTCCCCCAGTCAGCGTGGTAGCGGTATTCTCCGCGGCAGTGACAGTAATTGTT TTTGCCTCTTTAGCCAAGACTTCCGCCCTCGATCAAGATGGTGGTTGGACGGCCTTCCTAAC CTTTACGGGGCCTGGCGGTGCTGACGCCTGAGCTGGTAGGGGTGGAGCAGGTAGGAAACA GCAAATGCAGAAGCTGCTGCGCGGAAGTCGGCCATGGACTGGAAAGAAGTTCTTCGTCGGC AAATTAAGAGAGGAATCAAGAGCTGTCTTTCTACAAAGAAAAAGCAGAGAACTGTTAGATAAT GGAAGCGATGATCAATTACGAAAACTTTTTGAAGGTTGGTGAAAAGGCTGGAGCAAAGTGCA AGCAATTTTCACAGCAAAAGTCTTTGCTAAACTCCTTCATACAGATTCATATGGAAGAATTTC CATCATGCAGTTCTTTAATTATGTCATGAGAAAAGTTTGGCTTCATCAAACAAGAATAGGACT CAGTTTATATGATGTCGCTGGGCAGGGGTACCTTCGGGAATCTGATTTAGAAAACTACATAT TGGAACTTATCCCTACGTTGCCACAATTAGATGGTCTGGAAAAATCTTTCTACTCCTTTTATG TTTGTACAGCAGTTAGGAAGTTCTTCTTCTTTTTAGATCCTTTAAGAACAGGAAAGATAAAAAT TCAAGATATTTTAGCATGCAGCTTCCTAGATGATTTATTGGAGCTAAGGGATGAGGAACTGTC CAAGGAGAGTCAAGAAACAAATTGGTTTTCTGCTCCTTCTGCCCTAAGAGTTTATGGCCAGT **ACTTGAATCTTGATAAAGATCACAATGGCATGCTCAGTAAAGAAGAACTCTCACGCTATGGAA** CAGCTACCATGACCAATGTCTTCTTAGACCGTGTTTTCCAGGAGTGTCTCACTTATGATGGA GAAATGGACTATAAGACCTACTTGGACTTTGTCCTTGCATTAGAAAACAGAAAGGAACCTGC AGCTCTACAATATTTTCAAACTGCTTGATATTGAGAACAAAGGATACCTGAATGTCTTTTCA CTTAATTATTTCTTTAGGGCCATACAGGAACTAATGAAAATCCATGGACAAGATCCTGTTTCA TTTCAAGATGTCAAGGATGAAATCTTTGACATGGTAAAACCAAAGGATCCTTTGAAAATCTCT CTTCAGGATTTAATCAACAGTAATCAAGGAGACACAGTAACCACCATTCTAATCGATTTGAAT GGCTTCTGGACTTACGAGAACAGAGAGGCTCTTGTTGCAAATGACAGTGAAAACTCTGCAGA CCTTGATGATACATGATCTCTGAAAGACTAGACTGTCTTATATTATGAGATACTTGAATGCTG AGAACACANNNNNNNNNNNNNNNNNNNNNNNNNNNN

GAGGCCAAGAATTCGGCACGAGGAGTTTACCTGTGGAGCGGCGGCATGCTTGC AGCTCGGCGCAGCCTGTGAGAGCTGAGGGTCAGTTCTTCGAGTAGATCTCAAGCTGCGTT TTCCTCCTTCTCCAAAGCAGGGATGGGAAGGTGGAGGCTACTGGTTGAAGAGAAAAGGG GTTGGGGGAATGCAACACCTGCAAACACTAGGGATTGTGGGTCGAGCGGAAGAGCTAATGA GAGCCGAGCTCAGGTATCCCAAGTCAACCAGAATCAAATGCGCAGTACGCCACAAGGCATT TAATGCCCACAGTAACAGGGCTGTTTGACAGTGGCAGAAGAGACGGGACTAAAGTTACTTT GTGCTGAGAGGGGGAAAGAAGCACAAAGTTTGGTCTGTTGCGTAATTGAATTTTTAACACTC TTATCCACAACAACACTTTTTCGTGTCCTGCTGTGTAAAAGACATCAGATATATTACAGATTT TCAAACAGGTGAGCATCCTTTTACGAGCTGGGCAGGTGGGGAGTGGCGTGGTTTTGATGGA GTGAGGAGATTTGGTTGAATGAACGCTAAGATGGCCAGACGCACCTCTTCGATCTCAACTCT GCAGCCTGGGATTCCAGAGCTGCAAACAACCACTGAATTCGTTCTGTAAACCTGTTGTCATT TGACGTTTCCAGGCAGGCATCAACATTTACATTGTAATTCAATAGACGCTACTACTACAAAGG AGCTTTATTCTTCCAGCTTAATATGGTTGCTGCGGGAACACTGCAGGCGAAACGACTTTGGG GACGGCCCGCGCGGAACCCTTGGGAACAACGCAAATTAGCAAAGGCGTAATTTATAACCG CTGCTACCAAAGAGTGAAGTATTTGTGGAAGTTCTGACTGGAATCTAGCTCGTACATATGGA TTGTGGAAATAAAGGAGGACGTGGAAAGCTTGCCATATTTTATTTCAAGTTAATACTAAAGCT GCCAGACTTAATACAACTTTCTTTTAATCTTTATGGATCACATATTTTCTGAAAATTACATGAT >657 >658

# Table 4

GCTGTAGGCCCGGGTGGTTGCTGCCGAAATGGGCAAGTTCATGAAACCTGGGAAGGTGGT GCTTGTCCTGGCTGGACGCTACTCCGGACGCAAAGCTGTCATCGTGAAGAACATTGATGAT GGCACCTCAGATCGCCCCTACAGCCATGCTCTGGTGGCTGGAATTGACCGCTACCCCCGCA AAGTGACAGCTGCCATGGGCAAGAAGAAGATCGCCAAGAGATCAAAGATAAAATCTTTTGTG AAAGTGTATAACTACAATCACCTAATGCCCACAAGGTACTCTGTGGATATCCCCTTGGACAAA ACTGTCGTCAATAAGGATGTCTTCAGAGATCCTGCTCTTAAACGGCAAGGCCCGACGGGAG GCCAAGGTCAAGTTTGAAGAGAGATACAAGACAGGCAAGAACAAGTGGTTCTTCCAGAAACT AAAAcAagaacgcagagaacaaacccagcaaacgccgacacacaacggaagacgaagcagacaggacaggaacc cacgcggagggagaggaaaagagaagaaccgcaccggacaggcgcagcggcacaggcggagcgcggggagtccac aagcqqaactcagaacggacgcaccggccggaagtgacagagcagaaaagaggctgaacagaagacgccagcaacaggcac acagcaggaagccacgcacggagtcaacgacaataccgagcggcaggaagggaagagggacgacgaggggcactcgccag cggca >659

GAGGCCAAGAATTCGGCACGAGGAGTTTACCTGTGTGGAGCGGCGGCATGCTTGC AGCTCGGCGGCAGCCTGTGAGAGCTGAGGGTCAGTTCTTCGAGTAGATCTCAAGCTGCGTT TTCCTCCTTCTCCAAAGCAGGGATGGGAAGGTGGAGGCTACTGGTTGAAGAGAAAAGGG GTTGGGGGAATGCAACACTGCAAACACTAGGGATTGTGGGTCGAGCGGAAGAGCTAATGA GAGCCGAGCTCAGGTATCCCAAGTCAACCAGAATCAAATGCGCAGTACGCCACAAGGCATT TAATGCCCACAGTAACAGGGCTGTTTGACAGTGGCAGAAGAGGACGGGACTAAAGTTACTTT GTGCTGAGAGGGGGAAAGAAGCACAAAGTTTGGTCTGTTGCGTAATTGAATTTTTAACACTC TTATCCACAACAACACTTTTTCGTGTCCTGCTGTGTAAAAGACATCAGATATATTACAGATTT TCAAACAGGTGAGCATCCTTTTACGAGCTGGGCAGGTGGGGAGTGGCGTGGTTTTGATGGA GTGAGGAGATTTGGTTGAATGAACGCTAAGATGGCCAGACGCACCTCTTCGATCTCAACTCT GCAGCCTGGGATTCCAGAGCTGCAAACAACCACTGAATTCGTTCTGTAAACCTGTTGTCATT TGACGTTTCCAGGCAGGCATCAACATTTACATTGTAATTCAATAGACGCTACTACTACAAAGG AGCTTTATTCTTCCAGCTTAATATGGTTGCTGCGGGAAACACTGCAGGCGAAACGACTTTGGG GACGGCCCGCGCGGAACCCTTGGGAACAACGCAAATTAGCAAAGGCGTAATTTATAACCG CTGCTACCAAAGAGTGAAGTATTTGTGGAAGTTCTGACTGGAATCTAGCTCGTACATATGGA TTGTGGAAATAAAGGAGGACGTGGAAAGCTTGCCATATTTTATTTCAAGTTAATACTAAAGCT GCCAGACTTAATACAACTTTCTTTTAATCTTTATGGATCACATATTTTCTGAAAATTACATGAT >660

NNCATCACATCTCAACATCTCAGAGCCATCCTCTAAGTGTCACATGTTCCCTCTTAAT
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GCCTGGCTTCTCTAGGCACCTGAGTTCATGGTCCTGGGTTAGAAGCTGCAGAAAGGACTGT
GCTGACTCCCTCAACTAAGGGGTGGTACTACCGCTTGCTCCTCTCAGCAGCTGACATCCCA

GAGATCAGTTTCCTTTCTGGGAGGGACTCCTCATTGAGGGGGGTGCAGAAGACCTGCAGAC ACCAGACCTTTAGTCTCTTCTTCTGTTTCTGTTTTTGGCTTTCTGGACAGTGCTGACTCCAGC TCTTTCCTTCTTGGGATGCTGCTGCTCTTCCTCTTACCTCTGCTGCTTGAGCCAGTGTGTG CTCTGCTCTCGCTTCCCTAGCCCCGCTATCCTTCTCATCCCTTACATCCAAGATGTCCTCCT CCTCTTGATGCTGCTCTTTTCTTCTTGCTTTTCCTGCTTCTTCCATCACTGCATGCTCTGCT CTCTGCTTCCCTGGTTCCACCACCTAAAACAGTTTCCTCACCTCTATCTTCTAGGTTCAAGTC CTCCTCCTGTTGCTGCCTCTTCTTCTTCGGCTGCATGGGTCAGCATATGCCCTGCTCT CTACCTCCTCTGTCCTGACACTGCCTGCAGCCTCCTTGCCTTTTCCTCCTCCAAGACC CCCATCTTCTCCTCTTCATGGTGCCACCTCTTCTTTTTCTTCCCTTTCCTGAGGGACTGATTG GTTTGCTCTCTGCTATTCAATTCCCCAAGCCCACTTGTTCCTGCAGCGTCCTCCTTCTCATTC CCTTTAGTTGTACCCTCTCTTTCATCTGAGACCTTTCCTTCTTGATGTCGCCTTTTCTTCTTCT TGCTTTTTCTGATGTTCTGCTCAGCATGTTCTGGGTGCTTCTCATCTGCATCATTCCTTTCAG CTCTGACTGCAGTTGAGGGGCCCCAGGGTCCTGGCCTTTGAGACGAGCCAGGAAGGCCTG CTCCTGGGCCTCTAGGCGAGCAAGCTTGGCCTTCATTGTGATCCCAAGACGGGCAGCCTTG AAGTCAATGTAGCCATCTTCACAAACTTCTGATACAGCAAGTTGGGCTTGGGATGATTATAAC GGGTGGTCTCCTTAGAAAGGCTCCTTATCTGTACTCCATCCTGCCCAGTTTCCACTACCAAG TTGGCCGCAGTCTTGTTGAAGAGCTCATTCCACCAGTGGTTTGTGAACTCCTTGGCAGGGTC ATGTCCTACCCCATGAGTGTCTTGCTTCAGTGTCACCCTGAGAGCCTGAGTGATACCATTCT CCTTCCGGCCGAGGCCTTTGCCTTGAGTCCATCCATGCTTTAGCAGCTGCTCCTCAGCAAAC TTCATCCCACGACTCTTGACCTCTGGGGTGACATTCATGGTGAGAAAAAAGTCTCTATCCTC AGACTCTCACCAGAGAAGAAGAGGTGATATCATCCGTCATTGCTGGGTCCGCTCCGCGGAA ACATGTGCCGGACCTGACTTGTGCGCCGCCATCTTCCCCCGCGTACCCCTGCCCGCGCGG CCCGCTCTTAGAACTGAGTGGATCCCCCGGGCTGCAGGNAATTCGATGATCAAGCTTATCG >662 >663

GGGCTGCCTTGACCTGGCCTAGAGCCCTCCCCAGCTGGTGGTGGAGCTGGCACTCTCT GGGAGGGAGGGGCTGGGAGGGAATGAGTGGGAATGCCAAGAGGCCAGGGTTTGGTGGG **ATCAGGTTGAGGCAGGTTTGGTTTCCTTAAAATGCCAAGTTGGGGGCCCAGTGGGGCCCACA** CTACCTTCCACAAGTACTCCTGCCAAGAGGGCGACAAGTTCAAGCTGAGTAAGGGGGGAAAT GAAGGAACTTCTGCACAAGGAGCTGCCCAGCTTTGTGGGGGAGAAAGTGGATGAGGAGGG GCTGAAGAAGCTGATGGGCAGCCTGGATGAGAACAGTGACCAGCAGGTGGACTTCCAGGA GTATGCTGTTTTCCTGGCACTCATCACTGTCATGTGCAATGACTTCTTCCAGGGCTGCCCAG **ACCGACCTGAAGCAGAACTCTTGACTTCCTGCCATGGATCTCTTGGGCCCAGGACTGTTG** AAAAGAGAAAAAACCCTGCGGGGGGACATAATATTGCGCGGGGGCGAGAAACAAAGGG GGTAGATTGACAGGGGCGCAGTGGCGCCACAACAGCGGTGCTTCCCTGTACCCCCACGTTT TTTTTGTGACCCAGGGGTGGAACAACTCTACGCGCGCGCCCCCAATATTGGGACGGCGC GCGATAAAATTCAGAAAACCGCCCGCGTACCCCTGGATTAGAGTAGCGCGCCGAGGCAAAC AGCTAGCGCAATCATGAGATCAGCAAGGGCGACTCACCCACGCAGGCTCCATGGATGACGT GCCCGCAGCTGCTCGTGTAATCCCGTGCCCGCATTGACACGCAGCAGCCCCGAGCACGCA CTTCATGCGTATCGTTCAGCGATCCGGGACCAGCCCGGCGTCGACGATCCCAAGCGAAGC **GCGCCGCAGGACCACCACTGCTGCGGCTAAGAN** 

ACTGGTACGCCTCCGCGGTATCTGCATCGGGCCTCACTGGCTTCAGGAGCTGAATACCCTC CCAGGCACACACAGGTGGGACACAAATAAGGGTTTTGGAACCACTATTTTCTCATCACGACA GCAACTTAAAATGCCTGGGAAGATGGTCGTGATCCTTGGAGCCTCAAATATACTTTGGATAA TGTTTGCAGCTTCTCAAGCTTTTAAAATCGAGACCACCCCAGAATCTAGATATCTTGCTCAGA TTGGTGACTCCGTCTCATTGACTTGCAGCACCACAGGCTGTGAGTCCCCATTTTTCTCTTGG AGAACCCAGATAGATAGTCCACTGAATGGGAAGGTGACGAATGAGGGGACCACATCTACGC TGACAATGAATCCTGTTAGTTTTGGGAACGAACACTCTTACCTGTGCACAGCAACTTGTGAAT CTAGGAAATTGGAAAAAGGAATCCAGGTGGAGATCTACTCTTTTCCTAAGGATCCAGAGATT CATTTGAGTGGCCCTCTGGAGGCTGGGAAGCCGATCACAGTCAAGTGTTCAGTTGCTGATG TATACCCATTTGACAGGCTGGAGATAGACTTACTGAAAGGAGATCATCTCATGAAGAGTCAG GAATTTCTGGAGGATGCAGACAGGAAGTCCCTGGAAACCAAGAGTTTGGAAGTAACCTTTAC TCCTGTCATTGAGGATATTGGAAAAGTTCTTGTTTGCCGAGCTAAATTACACATTGATGAAAT **GGATTCTGTGCCCACAGTAAGGCAGGCTGTAAAAGAATTGCAAGTCTACATATCACCCAAGA** ATACAGTTATTTCTGTGAATCCATCCACAAAGCTGCAAGAAGGTGGCTCTGTGACCATGACC TGTTCCAGCGAGGGTCTACCAGCTCCAGAGATTTTCTGGAGTAAGAAATTAGATAATGGGAA TCTACAGCACCTTTCTGGAAATGCAACTCTCACCTTAATTGCTATGAGGATGGAAGATTCTGG TCAAGAGAAACCATTTACTGTTGAGATCTCCCCTGGACCCCGGATTGCTGCTCAGATTGGAG ACTCAGTCATGTTGACATGTAGTGTCATGGGCTGTGAATCCCCATCTTTCTCCTGGAGAACC CAGATAGACAGCCCTCTGAGCGGGAAGGTGAGGAGTGAGGGGACCAATTCCACGCTGACC CTGAGCCCTGTGAGTTTTGAGAACGAACACTCTTATCTGTGCACAGTGACTTGTGGACATAA GAAACTGGAAAAGGGAATCCAGGTGGAGCTCTACTCATTCCCTAGAGATCCAGAAATCGAG ATGAGTGGTGGCCTCGTGAATGGGAGCTCTGTCACTGTAAGCTGCAAGGTTCCTAGCGTGT ACCCCTTGACCGGCTGGAGATTGAATTACTTAAGGGGGAGACTATTCTGGAGAATATAGAG TTTTTGGAGGATACGGATATGAAATCTCTAGAGAACAAAAGTTTGGAAATGACCTTCATCCCT **ACCATTGAAGATACTGGAAAAGCTCTTGTTTGTCAGGCTAAGTTACATATTGATGACATGGAA** TTCGAACCCAAACAAAGGCAGAGTACGCAAACACTTTATGTCAATGTTGCCCCCAGAGATAC AACCGTCTTGGTCAGCCCTTCCTCCATCCTGGAGGAAGGCAGTTCTGTGAATATGACATGCT ACAGCCTCTTTCTGAGAATGCAACTCTCACCTTAATTTCTACAAAAATGGAAGATTCTGGGGT **AAGTTACTCCAAAAGACATAAAACTTACAGCTTTTCCTTCTGAGAGTGTCAAAGAAGGAGACA** CTGTCATCATCTCTTGTACATGTGGAAATGTTCCAGAAACATGGATAATCCTGAAGAAAAAAG CGGAGACAGGACACAGTACTAAAATCTATAGATGGCGCCTATACCATCCGAAAGGCCCA GTTGAAGGATGCGGGAGTATATGAATGTGAATCTAAAAACAAAGTTGGCTCACAATTAAGAA **GTTTAACACTTGATGTTCAAGGAAGAGAAAACAACAAGACTATTTTCTCCTGAGCTTCTCG** TGCTCTATTTTGCATCCTCCTTAATAATACCTGCCATTGGAATGATAATTTACTTTGCAAGAAA AGCCAACATGAAGGGGTCATATAGTCTTGTAGAAGCACAGAAATCAAAAGTGTAGCTAATGC TTGATATGTTCAACTGGAGACACTATTTATCTGTGCAAATCCTTGATACTGCTCATCATTCCTT CATCTATGTCCCTTGCTGTGAGCAAGAAGTCAAAGTAAAACTTGCTGCCTGAAGAACAGTAA CTGCCATCAAGATGAGAACTGGAGGAGTTCCTTGATCTGTATATACAATAACATAATTTGT **ACATATGTAAAATAAAATTATGCCATAGCAAGATTGCTTAAAATAGCAACACTCTATATTTAGA** TTGTTAAAATAACTAGTGTTGCTTGGACTATTATAATTTAATGCATGTTAGGAAAATTTCACAT TAATATTTGCTGACAGCTGACCTTTGTCATCTTTCTTCTATTTTATTCCCTTTCACAAAATTTTA TTCCTATATAGTTTATTGACAATAATTTCAGGTTTTGTAAAGATGCCGGGTTTTATATTTTTATA GACAAATAATAAGCAAAGGGAGCACTGGGTTGACTTTCAGGTACTAAATACCTCAACCTATG **GTATAATGGTTGACTGGGTTTCTCTGTATAGTACTGGCATGGTACGGAGATGTTTCACGAAG** TTTGTTCATCAGACTCCTGTGCAACTTTCCCAATGTGGCCTAAAAATGCAACTTCTTTTATTT AAAAAAAAAAAACCACTACAGGAGAAAACACCCCAAAAATAAGACAAAACAACAGAGGAAG CCGAAAGTGACACGCAACACACACACCCATATGACAAAGAACGACTCCCCACTCAGAGGA CAACCATAAATAACACCACAGCCCAGCCACATCAGATAAAGCAGCCAGATAACGAACAACCC ATCAACATGACAATGCGACCAAACGACCACCATGCGGGAGAAACAGCAGCACCACTTCACG **AAGCCCAGACCTCGAAACNN** 

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ATAGGGAGTCGACCCACGCGTCCGGCGGGGGGGGTCGCTCGACTCGGGGGGGCGGC CGCCGGGCAGGTACGCGGGAGACTTTCCCTGCCGGCACATGGACCTGGCCCAACCCTC ACAGCCAGTAGACGAGCTGGAGCTCTCGGTGCTCGAGCGGCAGCCAGAAGAGAACACGCC TCTCAATGGTGCCGACAAGGTCTTCCCTTCTTTGGACGAGGGGTCCCCCCGGCCGAGGCT AACAAGGAAAGCCCCTGGAGCTCCTGTAATAAGAATGTGGTTGGAAGATGCAAACTGTGGAT GATCATCACCTCCATTTTCCTAGGTGTCATTACAGTGATCATCATAGGCTTATGTCTTGCTGC ATCATGCTGAAGATTCCAGAGGAGTGTTTGCTGAAGAGGAATTGCCTCACCTGCTCACCGA AAGGCTCACAGATGTGTACAGTACATCGCCCTCTCTGAGTCGTTATTTTACTTCAGTTGAAAT AGTGGACTTCAGTGGTGAAAATGCCACAGTAACGTATGACCTGCAATTTGGGGTTCCATCAG ATGATGAAAATTTTATGAAGTATATGATGAGTGAGGAGTTGGTGCTGGGCATTTTTGCTACAG GATTTCCGTGATCAGAATATACCTGGTTGTGAGAGTCTGGGGGCTTGATCCAACATCCCTCTT GCTCTATGAATGAAGTGATGGAGGCTGGTCTCTGTCTGAAAGCAGTGCTCTACCAAAGTCCT GGAGATTGAAGGGGATCCACTCGGGTTTGCAGAGAAGATTCTGTGGATTAATACAGAAGCA CCAGCAACACCAGAGGGGTGGAGACTCCTTTCTCTCCCGATTCTACAGTCTGGCTCTAAGC CCAGTAAAACAGCTCCCGAGCACTGCTTCAGCTGGGTCCAGTCTTGACAAAGGCAGGAAGC CAGCTAGGGTGGGGCGATAGGGTCAGCGGGTATGTCCCACTGTTGGAGGTCACTGGTAT **TCTGNNN** >666

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## Table 4

GCGTCCGGGCTGATTTAATTGACAATTATCAAAATTACTGAATACAGAGAAAGGCAG
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>668

TAGGCTGGGTGCAGTGGCTCACGCCTGTAATCCCAGCACTTGGGAGGCCGAGGCA **GGCAGATCACTTGAGGTCAGGAGTTCGGGACTACCCTGACCGACATGGAGAAACCCTGTCT** CTACTAAAAAAAATACAAAATTAGCCGGGTGTGGTGGTGCCTGACTGTAATCCCAGCTACTT GGGAGGCTGAGGCAGGAGATTGCTTGAACCCAGGGGGCGGAGGTTGCGGTGAGCCGAG AAAANAAGATTCTATTAGAGATATGGCAGATGTACTCTCTGAGCTATTTAATTGATAAAGAA AAAGTAGGAGTTCCTGCTTTTTACTAAGATGATAATCATAATTATGATCATACTGATGAAAATA ATAAAATTGCTCTGACTGTGGTGAAGATTTTTTCCCATTTCTTCATTTAGCTATTCAGAAATAT **ATTTCACCCTCAGTTCATAACTGATATACTGCTAGAAGTTGAGGGTCAAATCGTGGCAACACA** CCGTGCACTTCATGGCATTGTTGAGCATGAAACAACTCTGATAGAGCCAGAAATTAAGATTC **GCTTATGGCTTACCCAAGGTAAATGCCAAGTCAATGGCAGAATGAAAATTCAAGCTTGGGGC** CAGGTGTGGTGGCTCACATCTGTAATCCCAGCACTTTGGGAGGCCAAGGCGGGCAGATCAC TTAAGCCCAGGAGTTAGAGACCAGCTTGGTCAACATGGCAAAACCCAGTCTCTACAAAAAAC AGTCAACCTAATACTCTGGTGCTTACTTTGCAAATCTTTTCCATAAGTCAAGTATTAGTGTTAA CAATACACTTAAGAAGTAAGGATAAACCCATCAAGGTCCACAGCTAAATAACCAGCAGATTC CCAGAAACTTTATGTATTTGGGAAAAGTAAAATATACAACAGACATATCCCTGCCCTGATTAA GAGGGTAGATAAAAACAAAACAATTTTACTTGAGATAGTAATAAGTTATTTGAAAAA AATAGTAAGGCTTGGGAATAGCTGAATTGTAAAACAAATCTGTCAGTCCAAAAACGAAGATAA TTCCATTCAACCGCTGACTACTGAATGGGAAAGCAAACGTTGTCACGTCTTCTATTTCTCTCA GCAGTAACTATTACTTAAAGTCTCACTTTCCATACACAAGAGCAAAAGAATCTAGTCAAAAGC **GGGAACTGTTAAAGCCTTACACCAAGGAAAACATAAACTTGTACCTCGGCCGCCACCGCGG** >669

AGAACCCAAGGAATAAATTTCTCCATATCGTTTCCTAGTTACCCTAATCTCTGCACAAATTTGT GTGTTACAGAAGCAGATCCAGAGCTTGAATAAAATGTGTTCAAACCTTCTGGAGAAAATCAG CANAGAGGAGCGANNN >670

CGGGAGGAGGACGCGGTGCGGTCTAGGAAGTAGGTCCCGGGCTCCGCGCTCAACAAAG ACGGGCCCCCCATTAGACGGAGCTGCGGGCGGAGGCTCCATGTTGGGAAGCGCCC CGTTCGTGCTTGTTAGCGGGAATCCGGGAGCCGCGGGGTGAGCTGGCGGGGGCCGGGCC CTAAGTGAAGATGGAGGCCCCGCTGCGGCCTGCCGCGGACATCCTGAGGCGGAACCCGCA GCAGGACTACGAACTCGTCCAGAGGGTCGGCAGCGGCACCTACGGGGACGTCTATAAGGC CAGAAATGTACACACAGGAGAGCTGGCTGCAGTAAAAATCATTAAATTGGAGCCTGGAGATG ATTTTTCTTTGATTCAACAAGAAATATTTATGGTTAAAGAATGTAAACATTGTAACATCGTTGC CTACTITGGGAGTTATCTTAGTCGGGAAAAACTATGGATTTGTATGGAATACTGTGGTGGCG GATCACTTCAAGATATTTACCATGTTACTGGACCATTATCAGAATTGCAAATAGCCTATGTAT GCAGAGAAACCTTACAGGGTCTTGCCTATTTGCATACTAAAGGCAAAATGCATAGAGATATC AAAGGTGCTAATATTTTATTGACAGACCATGGCGATGTAAAATTAGCTGACTTTGGTGTGGCT GCAAAAATAACAGCTACCATTGCAAAACGAAAATCTTTCATTGGCACCCCTTACTGGATGGC GTAGGAATAACAGCAATTGAACTTGGAGAACTTCAGCCACCTATGTTTGATCTCCACCCAAT GAGGGCTCTCTTCTTAATGTCAAAAAGTAATTTTCAGCCTCCAAAACTAAAGGACAAAACAAA AACTGCTGAAAGACTTCTGACTCACACTTTTGTTGCACAGCCAGGTCTCTCTAGAGCCCTAG CAGTTGAACTGTTAGACAAAGTGAACAATCCAGATAACCACGCACATTACACTGAAGCAGAT GACGATGACTTTGAGCCCCATGCAATCATTCGTCATACCATTAGATCTACAAACAGGAATGC CAGAGCTGAACGGACAGCTTCAGAAATAAATTTTGACAAATTACAATTTGAACCTCCTCTGAG AAAAGAAACAGAAGCACGAGATGAAATGGGATTGTCATCAGACCCAAATTTCATGTTACAGT GGAATCCTTTTGTTGATGGTGCAAATACTGGCAAATCAACCTCAAAACGTGCAATACCACCT CCCCTACCTCCTAAGCCAAGGATAAGCAGTTACCCTGAAGACAACTTTCCGGATGAAGAAAA AGCATCAACCATAAAACATTGTCCTGATTCAGAAAGCAGAGCTCCCCAAATTCTCAGAAGAC AGAGTAGCCCAAGTTGTGGGCCTGTGGCAGAGACTTCTTCTATTGGAAATGGTGATGGTATT TCAAAACTGATGAGTGAAAATACAGAAGGATCAGCACAAGCACCACAGTTACCACGAAAAAA GGATACATCCTGATACAAAAGATCAGTACATTATTTTTGGAACTGAAGATGGTATTTACACAC TGAATCTCAATGAGCTACATGAGGCAACGATGGAACAGTTATTTCCACGGAAGTGTACTTGG CTGTATGTTATCAATAATACTTTAATGTCATTATCAGAAGGAAAAACCTTTCAGCTCTACTCTC ACAATCTTATAGCTTTGTTTGAACATGCCAAAAAACCAGGATTAGCTGCCCATATTCAAACTC ACAGGTTTCCAGACCGAATACTACCAAGAAAATTCGCTTTAACAACAAAGATTCCTGATACAA AAGGCTGCCACAAATGTTGCATAGTCAGAAACCCTTACACGGGACATAAATACCTCTGTGGA GCTTTACAGTCTGGAATTGTTTTACTTCAGTGGTATGAGCCAATGCAGAAATTCATGTTGATA AAGCACTTTGATTTTCCTTTGCCAAGTCCTTTGAATGTTTTTGAAATGCTGGTGATACCTGAA CAGGAATACCCTATGGTCTGTGTAGCTATTAGCAAAGGCACTGAATCGAATCAGGTAGTTCA GCAGTTAGATTCCATTCATGTAACACAGTTGGAGAGAGATACCGTTTTAGTGTGTTTAGACAA ATTTGTGAAAATTGTAAATCTACAAGGAAAATTAAAATCAAGTAAGAAACTGGCCTCTGAGTT **AAGTTTTGATTTTCGCATTGAATCTGTAGTATGCCTTCAAGACAGTGTGTTGGCTTTCTGGAA** ACATGGGATGCAGGGTAAAAGCTTCAAGTCAGATGAGGTTACCCAGGAGATTTCAGATGAAA CAAGAGTTTTCCGCTTATTAGGATCAGACAGGGTTGTCGTTTTGGAAAGTAGGCCAACAGAA AATCCTACTGCACACAGCAATCTCTACATCTTGGCTGGACATGAAAATAGTTACTAAGCAACA GAAACTGATCTCAAATGACAGGAAAATGAATATACTCCATTGAAAGGAAAAATAAGGAAATTC **AATACAAACTGCACTATGATTTGCTTTAACTATTATGGGTTATATTGCAAATGATCTGTACTTT** AGGGTAGAATTCAATATTTTCTGCAGCTGGAAACAGCTAGTCTATCTCTTGCCACTGTGTGGT GGTTATATCAAGTTTGCTTAATAAAAGCTATGAGACAAATAGTCCTCTAGTTCCAGGAAACAC **AGTCTTTTTTAAAAAAAACAATGTTTGTAACAAGGGTGCCATGGTATTTTTAGATAACTCGTG** ATTATCTTAAGAGAGGTAAATTTAGTGATCATTTTATATCATGTCTTATTCCTTCTTAATGAACA TAATTTGTTAAATTCTCAAGCAAGGTTTTCACTTTTATATTGGCCATTCTGTATGTTTTTGTAAA

## Table 4

ACAGAATATTTAATCCTTATTTAATCTCTTGCTGGAGTGGTGTAATGTATCTAACTTTTAG CAAAGGAGGGTTGCAGAGCAGCTTAAATTTTTTTATAATGTATAAGAATTTTGTTTATCTTTT AAGTATTTTATAATACAGTTTCATACAGAATTACCTTAAAAGGGAGTCTTATGTTTTCAACTAC AGATAGTTGTAAGGGATCATACAGAAGATATTGATGATAGTTGAAATATTCTTAGAAGGGGTG TGTATGTCTAGCTGTGTCTACCATGTGTATGTATTCTTGACAAGCAGTATAAAATACCTGTGA TTTTTCTTTACATTAGGGATAATGCATAAGGAATTAATCTTCATATATTATCATCCCTAATGT AGCAGGGGGAAGTATTTAATTGCCCATGATATGTATTTTACTTATACTATGCCAGAGAGAAAA CTATAAAGTAATTACACATGTAATCTTGGGTTTTTCACATATGTAGGTATTCATTTTGAGTAGG TTGAAGAAGAAAAAAATATTTAAATGAATTGAATTCCTGATGGGATAGTATCAATAAGTATTT TTGTTAATATTCAAAATTAAAGTGTTACATTGGTACCTGTTGTCTTAATGCATTTATTGAGAAC **AGCATTGAGATGATGAACAAGGGGTTAGCAATAGCAAACTCTATAATTATTTTGACTAATTAC** TTAAGAGGAAAACAGTATAAGTATCTCATTCAGTATTTAGCAATTCTGTAAAATAAGTATTATC TCTATTTTCAGATGAGGAAGTAAGGGTTTAGCAAGGTTAAGAGATCTATCCAATTTACACAG CAAGTTAGTAGTTGAGCCTGACCATGAGTCTT

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CCACCTAATAAATAAATCCTTGCATGACAAACCTGCAAAATATTTTATCAGCTGTTATT **GGAAAGTGATTTTAAGCAATTGCTTCCTCAGTGTCAGGGCACATGTGAATTTCCACACCAAA** CAGAGCATGAGGAACCAGTTGACATGCTGGGTTGTGACTGGCAGCTTTAGCAGCCTCGGTA CTGAAGCCACACCAGTGTCCGGATGGAAGTCTGCATCTGAGGTTGCTCAGTGTCCCGGTCA TTCATTTACACATTTTAACTTGCATTAAAGAGCTGTTCTTTTCTGTGGCCTAGACTCTTTTCAC TGCATGTCTAAAATTACATGGAGTTAGTGTCTATTCTTTTTCCCCTTTTGCAGCAACTTACACA **GCATTTTTAACACCTTTTTTTTCTAGTTTTTTTGTTCGGTTTTGTTTTCCATCAGGAATTTGAGT** TCTCTCTAACCCAGCTTACTGTGGGACATAGGAAAACTCAGTAGAAATACCTTTGGTGATCTT GTTGAGTTTAAGTCTGATCTTGATCTTAAACTCAGTAAGCCACTATCTGCAATTTTGTACATTA GAGGGGAAAGTTATGTTCTGCAAATAGTGTGTCTTATTTTACTGTTGAACAGCAATTGCTA TTTATTTTTTATTGCCTAGAACTTCAACATGTTGTATAGGAATCCTGTAGTGCCACTAGTTAA ATGCCGAATTCTCATCTGGATGTTACCATCAAACATCAGTACACTTGTCATTTCACATGTGTT TAATGTGACAGTTTTTCAGTACTGTATGTGTTAATTTCTACTTTTTTTAATATTTAAAATTGCTT **GTGGCGGACNN** 

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## Table 4

NTTTTTTTTTTCCTTTTTTTTTTTTTTTTTTTTTTTTAAACTATTTAATTCACT CCTTTATTCTGGGATGTATATTACAGATAACACACTCACAAATATACCATCAGACATTGAAAA ATGAATTACCAAAACCAAGATTCTCTTCTAAAATGAAAATTTAATGCAGGTACAGGATAACTTT AGGGCTATATCTAATCTGAAGCTTATCAGGTAGCAAAACCATTTTCGTTTTCTACAGCATAAA TAACAGCTCTAAGGCAACCACTACCTCAGCATGAAGCTCATTTCTCCACGTTAGAGTAGTGT TTACCTGCTACAGTGACCAGTGTTTAGAGACCATTTCCCTTTCAGTAGCAAAAAGAGACTTTA CCTAAGAAACACACTACATACTACAGAATCCTTGGAACAAGAAACAGAAAGGGAGCTGTAAC TAAGGCACTGAAAGCACATTATTTGTATAAAGAAATGTAAACAATTTAACACCAACAGGCTCC CTCCGTTGGAGTCTTTATTGTAAATGCACACAGGGCATCATAGTCAGGGCTAGAGTTTGAA GTCTGGGTGAAACAATGTTTCTGCAGAGTTCAGAGTCTTGGCTGCCAATATATTTCTAACAT GGTGCTGTTGAATTAACTATTTCAAAGTGACTCAAGTGGAAGCTGGTATTTCCCTTGAATCTG AGTTTTAATAGCATTAACAAACAAGGAAGAATTTTATAGGAGTCCTAAAATTATGGGCTCTTTC TAACATTTATTTGAGTCTTTTATCAAGTTCTTCTAATGAATTTTAGGATTATTTTTGGCTTATTTC ATCAAGGAAGTTTGGTGTAAGAACTTGTTACCTAATGAGTGCCCCTCCTTGTAAGTTCATATT TCAAGTTACATGGTTCATGCCATAAATAAACCACACTTGCTTTAACATCGTTCAGAATGGTAC ATTTAACAATTGGACATACAGCACTGTAAACAATTCAAAGTCCATTGAGCTTACCATGAAAGA ACTGAAACGTATGTAGGAACTGTGTCCTGCTGCAGACAAGCAGCTGCTCTGGCTCTGGTGC GGTGCGGTGCAGTGAGGTGAGGTGGGCTGGTGTGAAGGGAGAATTCCTGAGGCCAGTC ACAATTATTGAAGCTAAATTAATTTCTTCCTGACACTTTAGCATTAATTCTAAGTAGTTCTAAG TTCTAAACCATTAACTGTATAGTTAANNNNNNNN >678

NAGTTGTGGGTCTTCCTTTGCAACGTTTCTTCTTCGCTGTGCCTCTGGTCGCCATCA CAAACTGCATTAGGAAATGAGAGCGAGCATGTGGCCTGGCTTCTTGATGGAGATCGTCCTC GCTCTTTTCATAAAGGGTCCTAGATGAACACCGATTCCCTCCTGTGGTGATTGGCTATGGCA GCCAGTGTCCCGTGTCCTCCATATGAGGAGTGAGGGCCTGCAGATCCCTCCATTGGCCA GCCTGGTTCTGGGAGAGAGATACTGAACTCAGCTTGGCCCTGGTCCCATTTCTTCCAGTACC CGCTGGTGGTCTCTGCCCTCACCAGAGCTGGAAGGACTTGATGTGGTTTGACCACATCACT GTAGGATTTTCTCCCAGATGGGGATGACCAGCTGCATCACTCCCCAGAGTCCTTCCGGAGA AATAAAAGCATAGGCATGGCGGCTAAGGGAAGAAGGCATAAGAAGGCAGATTGAGGATTGT TAAGAAGACTCCGCCCTTGCCCAGCTCTGCCTACCATAGTATTGCTCCCTTTTGGTCACT GATGCACATGACTAAGAAGAGTTCTCTCCTGAGTAACTACATGACTTTGGAGATCTTTGTCAT TCTCTTCACTGCTTATCTTCCAGAACTCATGATTACCCACACATGCCTTTTTACCAGGCAGTA AGAAATGCAGCCCCCTAGGTAGTAGCATGGTCCCCTCCTTGGCCCACTCCACTCTTGCCC TCAACCTCTTTCAACCAAACATTATCACCCACCTTAAGAAATTAAAAAAATAATTCTGTCCCAGT CTGTCTGAACTTAGTACATGATCCAGGATGTGATGGGATCTTAGGGCTTGGCTGGAAGGTTT CTCCAGTCAGCCATCTAGCAGAGCTGCAGATCTGGGCTGGGCTGTTGGCTAAAGTGCTCTT CACAGACACCTCATTCGGCTCTTCCTTCAGCTTCTTCACTTATTTCTTACTCAGTCACTACTC AGCTCCTTGTCCATGTGTCCTTGAAGCCATCCTAGGTCTTATTCTGATTCTGAATTCTTCAGT TCTTCTCCTTTATGATCCTTTCCCTTGGGTGGACAAGTGTGATTTGGTTGTAAGGCCATTTTT CAAGTTGCCTATACATTGATAAAAGAAATCCCACTAACGGAAGTAGACTGCATGCCAGATTTC AGTGTCTTTCTCCAGGGGCCAAGGTTGGACCCAGAAGTGCATGGGGTGCTTGGTGTCGTTC AGCACCTTTTCTACAAATCTTTATTCTCTGTGAGCATGACACCCTACCGTTTTTTTCAACCGG TTGTCGTTAAATCCTAAAAAATAAGTTGTTCTACCTTTCTGTTCTACAGACCCACAGATGCAG GGCAGTCAGCGGTGGCAGTGTTTGAACCATCAATTGGGAGGGGAAGGTGGTTTCCTGTGCA 

## Table 4

ACACATTGGTTTTCCCCCTCAGACCATTCCCGGAGTAATAAATCCAGTTGGAGCAGCAGTGA TGAGAAGAGGGGATCGACACGTTCCGATCACAACACCAGTACCTGCCCGGGCGGCCGCCA CCCN >680

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NACCGTACAGTGCCTGTTTCCGTTGTACCTGAGCATGCTCAGGGACGGTGAGC CTTGAGAGCTGAGGCTTCGGCAGAAAACAGCCCTCCTGGGTAAATTCTCATTACTTGCCTAC TCAAAAGGATTGACAGAGTTTCCTGTTGTCTTGCCTGCACTTGGCCCCAGTTAAGAGGAGGT TGAGATCTATAGTACCAGCAACATAACAGGTAAAGCTCTGTGGCTGGTTTGTATGGGCCAGT TAGCCCTGCCAGCTGTTTCTGCCTTCTCATGTCTGTCCTGGATCCTAGCTCGGTCTCTCTGA GTGGCCTCACCTGATCGAGAAAGCAGCTTCGTCATTCTTTAGCATCAAACCTGGTGTCTCCC AGTGTGGGGAGAGCCTTTTGTCTTTGGAGTTGGGCCTAACCTGTCCCTCGCTGTCCTTTCTC CTCTAGGTTGTGCGCTTGCGACTTGGACACCATGCTGAGGGCACTGTGCCCCTTTCCTGGG TGTGGACAACAGGTCATAGGGAAAGGGGGGGGGCTCTAGCGGGAAATTCCTTTGTAAACCAG AACATCAGGCTTCCCAGAAGGAAAATAAACAGCTGAGTCTGAAGGTGGATGAACTGGAGAG GAAACTGGAGGCGACCAGTGCCCAGAATATCGAGTTCCTACAGGTGATTGCCAAGAGGGAG GAGGCAATCCACCAGTCCCAGCTGCGGCTGGAGGAGAAAACACGGGAATGTGGGACCCTG GCAAGGCAGTTGGAGAGTGCCATTGAAGATGCGAGGAGGCAGGTGGAACAAACCAAGGAG CACGCACTCTCCAAGGAGCGAGCAGCCCAGAACAAAATCCTGGACCTTGAGACCCAGCTGA GCAGAACCAAAACGGAATTGAGCCAGCTGCGGCGGAGCCGTGATGATGCGGACCGCCGCT ACCAGAGCCGGCTGCAAGACCTGAAAGATCGCCTGGAGCAGTCCGAGAGCACCAACCGCA GCATGCAGAACTACGTCCAGTTCCTCAAATCATCATACGCCAACGTGTTTGGGGATGGTCCC **ATCAGGGCCTGGAGCCCTGATGGAAGCCATAGGAACTCCAGAGTTGCCAAGCCATAGCTGA** GAAGCCTGGTGGTTTTCCTCTCCCAGTGAAAAAATGGGTTCAGGGTCTTGTCCTTAGCTACT AGCTCTAGAAAAGTCCCAAAAGCAGCAGAAGGTGAAGCAGGAAGCACTTGGTTTTCTCCTTC CTGATATAGTCACCTGTTGGAAGTGTTAAAATTTCCTCGACAGGCCTTAAATTTACTACTACA CCACAGTCCTTACGCTCATGTTAGGATTCTCCCAGTTTTCTGCTAACAGGGAGTCTCTGGGT GAGCCCACTGTTTTTTCGTCAAGCGNN

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# Table 4

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ACGCGGGGGCGCTTCTTAGCTTTACGATGGCAACAAGTATGGCGGCTGCTAGTG GTAGATTTGAAAGTGCGAAGAGTATCGAAGAGCGGAAAGAACAGACCCGGAATGCCAGGGC CGAGGTGTTGCGCCAGGCTAAAGCCAATTTTGAAAAAGAAGAAGAAGGCGTAAAGAACTTAAGC GACTTCGGGGTGAGGATACATGGATGCTACCTGATGTGAATGAGAGAATTGAACAGTTCTCA AAAGAAAAAAAGAGCAAGAAACAGAAATATGAAAAAAACAATGAGTCATCTGATAGCTCATC AAGCTCTGAAGATGAGTGGGTTGAGGCTGTTCCATCCCAGACTCCTGACAAGGAAAAAGCC TGGAAAGTGAAAGATGAAAAGTCAGGAAAAGATGACCCCAAATTATCAAGAGGGATGAGTG GATGACTGTTGATTTTATGTCTGTTAAAACTGTGTCATCATCATCACTCAAAGCTGAAAAGGA AACTATGAGGAAAATAGAGCAAGAGAAAAACCAAGCGCTTGAACAGTCCAAACTGATGGAAA GAGAATTGAATCCGTACTGGAAGGATGGTGGGACAGGTCTTCCACCTGAAGACTGTAGTGT GTCATCGATTACTAAAGTTTCAGTGGTAGAAGATGGTGGATTAAGCTGGCTAAGGAAATCTT ATCTAAGAATGAAGGAACAAGCTGAGAAACAAAGTAGAAACTTTGAGGACATTGTAGCCGAA AGATATGGGTCAATGGAAATATTTCAGTCAAAATTAGAAGATGCTGAAAAAGCTGCATCCAC GAAAGAAGATTATAGACGGGAACGGTGGAGGAAACCCACATATTCAGATAAAGCACAAAATT CAACAGATACTGCAAAAAATAGCAATAATGAAAAATTTATTGGTGATGAAAAAGATAAGAGAC CTGGGTCTTTAGAAACGTGTAGAAGAGAATCTAACCCAAGGCAAAATCAAGAGTTTTCTTTTG GCAATTTGAGAGCTAAATTCTTGAGACCCTCTGATGAAGAACTGTCATTTCACAGCAAG GGCAGAAAATTTGAACCACTTAGTTCATCTTCAGCATTGGTAGCTCAGGGCTCTTTGTGTAGT **GGTTTTAGAAAA** 

NNNNNGTGCAGTAGACGTGTGTATAGTTTTATGACCAGGAAAAAGAGTTGTAGCTCT
GTGTTGATTTTTCTTATCTCCTGCCCTCCCTCTCCAAAAGAAAAGACATAAATTAAACTAGGA
ACTGAGAGGGGATAAGTTAGACCTAGCACTGCCACCAGCCCAGTGCTCTCTCAGAGAATCAC
ATTGCCTTGTGTCATTCTAGGTGGCCCCAGCAGATGGCTTCTCTGATCTTGCCATGCAAGTA
ATGACGTCTCCATCTAAGAACTACATTCTCTCTGTGATCAGTGGAGCATCTGTATATTGTTC
CTGATTGGCCTGATGTGTGGACGGATCACCAAGCGAGTGACACGAGAGCTCAAGGACAGGT
AGAGCCACCTTGACCACCAAAGGAACTACCTATCCAGTGCCCAGTTTGTACAGCCCTCTTGT
ATAGCATCCCCACTCACCTCGCTCTTCTCAGAAGTGACACCAACCCCGTGTTAGAGCATTAG

# Table 4

ACCACATTTTTACTGCATCTGCTCCACGCTGGATTCCAACATGCTGGCCCGGAGCGTGGCT TACTCACTGTCCCAAGTCCAGAGGCAGTTACAAAAAACACTCTTGATGCAAACCGTGAGTGG CTACAACACACGGATGGGGGGGGGCGCGATTCCCACAACAGGGAGTGGAATCCGGGAAGA TGATATATAGGGGCAAGACGCCCCCTTACTTGCTAAGAGTATATGGAGCTCAAAACCCACAA TTGCTTTGTTTTGTTTCTCAGTTCCTGGAGTATGTTGAAACTACTTGCTCTTAACATTAGTTCG CACCTTATAGTTATTCCTACTGATATAGGATGAAGATTATAAATATCTGCATAAAAAGAGAAAAC CATGTGACTCTATATGAAGACAACCATCACATTCCACAGCACATCATTGGTTCATTTTCGAAT TGTCAAGCAGTATTTGAAATGAGAGAGAGAGAGAATATAACTGAACACAAGCACCACGACAA AACAATCATAACAACAGAACCAAACCCAAACTTCTCTATTATTAATCATGTTAAAAATTTTAGCT TTGTTTCTAACACTTTTCTTTACTTGTTATTTTAAGCTCCAGTAGCAGGATCAGATTTCTGCTG CCTCTAGGCAAATGAGTTATGATCTGATCTCGAGTTCCAAGGGAAAATGCTCAAAGTTTTATT TTCCCCAGTTGAATAAACAGTACCATGTATATTATCTCTCGTGTTAGAATAGTGTTGTCTTCAC ATAAGACTCAAATAATGGTATTAGTCATTCATTTCCCTGAACACAGACACCCTCATGCGTGCT GACAGGTTTATAAGGATGCGGTGGCAGCCGCGGGTTCTGGGAGCTGCTAGACGGCCGAGT TTGATTTCTTGCAGTCCTGAGCGATGGAGCCCGGGGGTGCCTGGTTATTGTCCGCTTTCTCT CTCAGATGCTTGGTTTTTCAAGAGAACCTTTTTCGATATTCATTGCTCCATCGATTGGA TCCAGTCCTTGTTCAGAAAATTGTTTCAAGGCACTTAAGGCTGCCTGAAAGCCTTGAATCCTT GCTTCTTAGAAAAGCTAAGTCCTGGGTTCCCTCTGATTTTAGGTTCCAGGAACTTTCTTGGAA **CACCCGATCGCAGANNNNNN** >691

NNNGCAGCCTCCGGAGTCAGTGCCGCGCGCCCCGCGCCCCCGCGCCTTCCTGCTC GCCTCCGACCGCAGGCCGAGGGCCGCCACTGGCCGGGGGACCGGGCAGCAGCTTGCG GCCGCGGAGCCGGCAACGCTGGGGACTGCGCCTTTTGTCCCCGGAGGTCCCTGGAAGTT TGCGGCAGGACGCGCGGGGAGGCGGGGGGGCGCCCCGACGTCGCGGAGAACAGG GCGCAGAGCCGGCATGGGCATCGGGCGCAGCGAGGGGGCCGCCGCGGGGCAGCCCTG GGCGTGCTGCTGGCGCTGGGCGCGCGCTCTGGCCGTGGGCTCGGCCAGCGAGTACGA CTACGTGAGCTTCCAGTCGGACATCGGCCCGTACCAGAGCGGGCGCTTCTACACCAAGCCA CCTCAGTGCGTGGACATCCCCGCGGACCTGCGGCTGTGCCACAACGTGGGCTACAAGAAG ATGGTGCTGCCCAACCTGCTGGAGCACGAGACCATGGCGGAGGTGAAGCAGCAGGCCAGC **AGCTGGGTGCCCTGCTCAACAAGAACTGCCACGCCGGCACCCAGGTCTTCCTCTGCTCGC** TCTTCGCGCCCGTCTGCCTGGACCGGCCCATCTACCCGTGTCGCTGGCTCTGCGAGGCCG TGCGCGACTCGTGCGAGCCGGTCATGCAGTTCTTCGGCTTCTACTGGCCCGAGATGCTTAA GTGTGACAAGTTCCCCGAGGGGGACGTCTGCATCGCCATGACGCCGCCCAATGCCACCGA AGCCTCCAAGCCCCAAGGCACAACGGTGTGTCCTCCCTGTGACAACGAGTTGAAATCTGAG GCCATCATTGAACATCTCTGTGCCAGCGAGTTTGCACTGAGGATGAAAATAAAAGAAGTGAA AAAAGAAAATGGCGACAAGAAGATTGTCCCCAAGAAGAAGAAGCCCCTGAAGTTGGGGCCC ATCAAGAAGAAGGACCTGAAGAAGCTTGTGCTGTACCTGAAGAATGGGGCTGACTGTCCCT GCCACCAGCTGGACAACCTCAGCCACCACTTCCTCATCATGGGCCGCAAGGTGAAGAGCCA GTACTTGCTGACGGCCATCCACAAGTGGGACAAGAAAACAAGGAGTTCAAAAACTTCATGA **AGAAAATGAAAAACCATGAGTGCCCCACCTTTCAGTCCGTGTTTAAGTGATTCTCCCGGGGG** CAGGGTGGGAGGAGCCTCGGGTGGGGTGGGACCGGGGGGACAGTGCCCCGGGAAC CCGGTGGGTCACACACACCACTGCGCCTGTCAGTAGTGGACATTGTAATCCAGTCGGCTT **GTTCTTGCAGCATTCCCGCTCCCTTCCCTCCATAGCCACGCTCCAAACCCCAGGGTAGCCAT** GGCCGGTAAAGCAAGGCCATTTAGATTAGGAAGGTTTTTAAGATCCGCAATGTGGAGCA GCAGCCACTGCACAGGAGGAGGTGACAAACCATTTCCAACAGCAACACAGCCACTAAAACA CAAAAAGGGGGATTGGGCGGAAAGTGAGAGCCAGCAGCAAAAACTACATTTTGCAACTTGT

# Table 4

TGGTGTGGATCTATTGGCTGATCTATGCCTTTCAACTAGAAAATTCTAATGATTGGCAAGTCA CGTTGTTTTCAGGTCCAGAGTAGTTTCTTTCTGTCTGCTTTAAATGGAAACAGACTCATACCA CACTTACAATTAAGGTCAAGCCCAGAAAGTGATAAGTGCAGGGAGGAAAAGTGCAAGTCCAT TATGTAATAGTGACAGCAAAGGGACCAGGGGAGAGGCATTGCCTTCTCTGCCCACAGTCTTT CCGTGTGATTGTCTTTGAATCTGAATCAGCCAGTCTCAGATGCCCCAAAGTTTCGGTTCCTAT TGTCAGAAAAAGGAAACCACAGTGAGCCTGAGAGAGACGGCGATTTTCGGGCTGAGAAGGC AGTAGTTTTCAAAACACATAGTTAAAAAAGAAACAAATGAAAAAAATTTTAGAACAGTCCAGC AAATTGCTAGTCAGGGTGAATTGTGAAATTGGGTGAAGAGCTTAGGATTCTAATCTCATGTTT TTTCCTTTTCACATTTTTAAAAGAACAATGACAAACACCCACTTATTTTTCAAGGTTTTAAAACA TCCCAGAGGAGCAGCTCTCCCCAGGCATTTGCCAAGGGAGGCGGATTTCCCTGGTAGTGTA GCTGTGTGGCTTTCCTTCCTGAAGAGTCCGTGGTTGCCCTAGAACCTAACACCCCCTAGCAA AACTCACAGAGCTTTCCTTTCTTTCCTGTAAAGAAACATTTCCTTTGAACTTGATTGCC TATGGATCAAAGAAATTCAGAACAGCCTGCCTGTCCCCCGCACTTTTTACATATATTTGTTT CATTTCTGCAGATGGAAAGTTGACATGGGTGGGGTGTCCCCATCCAGCGAGAGAGTTTCAA AAGCAAAACATCTCTGCAGTTTTTCCCAAGTACCCTGAGATACTTCCCAAAGCCCTTATGTTT **AATCAGCGATGTATATAAGCCAGTTCACTTAGACAACTTTACCCTTCTTGTCCAATGTACAGG** AAGTAGTTCTAAAAAAAATGCATATTAATTTCTTCCCCCAAAGCCGGATTCTTAATTCTCTGCA ACACTTTGAGGACATTTATGATTGTCCCTCTGGGCCAATGCTTATACCCAGTGAGGATGCTG CAGTGAGGCTGTAAAGTGGCCCCCTGCGGCCCTAGCCTGACCCGGAGGAAAGGATGGTAG AGAGTTATCCTGATAAATTAACCTCTCACAGTTAGTGATCCTGTCCTTTTAACACCTTTTTTGT GGGGTTCTCTCTGACCTTTCATCGTAAAGTGCTGGGGACCTTAAGTGATTTGCCTGTAATTTT GGATGATTAAAAAATGTGTATATATTAGCTAATTAGAAATATTCTACTTCTCTGTTGTCAAA CTGAAATTCAGAGCAAGTTCCTGAGTGCGTGGATCTGGGTCTTAGTTCTGGTTGATTCACTC AAGAGTTCAGTGCTCATACGTATCTGCTCATTTTGACAAAGTGCCTCATGCAACCGGGCCCT CTCTCTGCGGCAGAGTCCTTAGTGGAGGGGTTTACCTGGAACATTAGTAGTTACCACAGAAT ACGGAAGAGCAGGTGACTGTGCTGCAGCTCTCTAAATGGGAATTCTCAGGTAGGAAGCA ACAGCTTCAGAAAGAGCTCAAAATAAATTGGAAATGTGAATCGCAGCTGTGGGTTTTACCAC CGTCTGTCTCAGAGTCCCAGGACCTTGAGTGTCATTAGTTACTTTATTGAAGGTTTTAGACCC ATAGCAGCTTTGTCTCTGTCACATCAGCAATTTCAGAACCAAAAGGGAGGCTCTCTGTAGGC ACAGAGCTGCACTATCACGAGCCTTTGTTTTTCTCCACAAAGTATCTAACAAAACCAATGTGC AGACTGATTGGCCTGGTCATTGGTCTCCGAGAGAGGGGGTTTGCCTGTGATTTCCTAATTAT CGCTAGGGCCAAGGTGGGATTTGTAAAGCTTTACAATAATCATTCTGGATAGAGTCCTGGGA GGTCCTTGGCAGAACTCAGTTAAATCTTTGAAGAATATTTGTAGTTATCTTAGAAGATAGCAT GGGAGGTGAGGATTCCAAAAACATTTTATTTTTAAAATATCCTGTGTAACACTTGGCTCTTGG TACCTGTGGGTTAGCATCAAGTTCTCCCCAGGGTAGAATTCAATCAGAGCTCCAGTTTGCAT TTGGATGTGAAATTACAGTAATCCCATTTCCCAAACCTAAAATCTGTTTTTCTCATCAGACTC TGAGTAACTGGTTGCTGTCATAACTTCATAGATGCAGGAGGCTCAGGTGATCTGTTTGAG GAGAGCACCCTAGGCAGCCTGCAGGGAATAACATACTGGCCGTTCTGACCTGTTGCCAGCA GATACACAGGACATGGATGAAATTCCCGTTTCCTCTAGTTTCTTCCTGTAGTACTCCTCTTTT AGATCCTAAGTCTCTTACAAAAGCTTTGAATACTGTGAAAATGTTTTACATTCCATTTCATTTG TGTTGTTTTTTAACTGCATTTTACCAGATGTTTTGATGTTATCGCTTATGTTAATAGTAATTCC CGTACGTGTTCATTTTATTTTCATGCTTTTTCAGCCATGTATCAATATTCACTTGACTAAAATC >692

NNNNNNNNGCCTGAGGTGGGTGGCGTGAAGTTAAGGGAGTCAGGGGCTATC
GCTCCTCGAGACTCGCAGTCGCGGCCACTGCAGTCACTTCGCCAGTTAGCCCTTAGGGTAG
GAGTCGCGCCGCAGCGGGTGTGTGGACGCCGCTTTGTTGCCTGAGATGAAGTTGGAGCC
CTTGTTTTTGACATTGGATCCTATACTGTGAGAGCTGGTTATGCTGGTGAGGACTGCCCCAA
GGTGGATTTTCCTACAGCTATTGGTATGGTGGTAGAAAGAGATGACGGAAGCACATTAATGG
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CGTGTTCCGAGGGAGAATATGGAGGCCATTTCACCTCTAAAAAAATGGGATGGTTGAAGACTG

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ACTCACTTAAATAATTGGTAAGATGATTTTATCTGACAATTAAAAAAAGGTATAT GTGAAAAACCTTAAAAAAAATCTATTTCATTACATGTTGAAATGTTCTGTGCTTAATCCAATAC ATCATTTAAATTCTTTTCACATTTGGACAACAGAAAAACTGAAATCTATGGATTCCAAGCTGCA AAGTATTTTATCTAAATTGCAAATCAAAAAAACATCTATAACATCTTGTTGGGGATACAAAGTTC

# Table 4

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>736

Table 4

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NNNNNNNAGTAGAGACAGGGTTTCGCCATGTTGACCAGGCTGGTCTCAAACTCTT GACCTCAAGTGATCCACCTGCCTTGNCTCCCAACAGCTGGCATTACAGGCGTGACACCNGT GCCCGCTGAGTTATGTAAACTTCAAAAGCCCACGGCCCGGGGCACACATTCACACACCCA CACCTTTTATAAGGAAGCATGCGTGTTCAGGACACACCATCAAACACATCACAGTGGGTATCT ATTCTATTTTTGTTCAAAAAAAGTCTTACACACGTGTTATGTGTAGAGAAAAATGTTAGGAA GGATGTGTGCCAACATGTTCAGAGTGATATTTCTGGATGGTGGTAGTATGAGTAATTGACAT CTTTCTATTTACTAATGAGCATTTTGTAACTTTTCTACCAAGAATGTTATATACAATATATACT TTTAAAAAATGCTAAAAGTTAACAAAACAAAAATGGATTTCATTAACTGTATAAAACACCTGTT TCTTTCAGCTAGCTGCCATCCTCTCATCTCTGACTGCTTCTCTAAACCGCTCATGAGCATTAA TGCACTGCATCAACCTATCGTGTTCACCTTGTCCTTACTCTTGCTGTTTCGTGGCCTGCAAAG CCCATGTGCTCCTGCTCAGAGCACATCCAGACTCTGTTGATCCTTCAGCACAATGTTCCTCC CTCAATCCTTCACTGGGAACATTAGCCAATGATGACTCCATCCCTTCTAAAATACCCAGCACT GATGCTCTAGCATATATCAACTATAATTTCATCATTTACACCATTTAATAGAATTCTGAAGTTT CCTCCTACAAGCCTTTTCTTCCAGAAAGTCTGTCAGTACTTCAGGTTAGAGATGACTTCAATA TATGTCGCAGACCTCCCAAGGTGAGCATCACACAGCACTTATCATAACCACGAAGCAGCTCC ACAGAGGCTAAGATGAAAAACAAAAATCTCAGGAAATTTATGTTTATAAAAATGATACTTGCAA AAAAATGAATGGAACCATCTCCATTGCTTATTTAGAGTGTTGACTCACTGAATAAGATTTTAAA TTAGTCAATAGTATTGGATGCCTCTATATCTGCATATCAATAGGCTCATAAACAAGGTTGCTC AAAGAACTGCCCATCAACCACTTGGTTTCATCTCTGGACACCACTGTTATCTTCCTTTGGC CTCTGTCCATAACGGGTCCAGGCTACGTGCACCAAAGGAAAAGAATTGGGTCCTTCTCCCCT CCCCTGGTTTGGTTAGGAGGGCCCAGAAAGAAGTCAGGACAGACCAGGTGTGACTGTCCCT AACCCAAAGCAGGCTACCGTGCAGAACCCAACCCAGGACATAATCACCAGCCATGCGGGAA CATGGTTAGCATGACCAGCACTCATCACAACGATCCCAGCCTTTGTATTAATGGTGCCAAAT **ATAGTTTTCAAAAGCAATGTTCTACCATTCCCCACCTTCTAACAGTAATGATCATTTTGATTAG** 

TTACTAATAGAAGTCCCATGGACTTAAGATCTGAGCAAATAAAGCTTTAATCTTCTTAAGCATA TAATTACTGGCATTTGAAAAGGCATGACATT >742

CCACGCGTCCGAGAAAACTAACATTTACTGTATAAATGTTTGAAGGGCTTTTGTGTG TTGTCTTATTTAATCTTCACTCATTTTACAGATGAGGAAACTGAGGCTCACAGAGGTTAAATC ACTITTGCAAGATCGCATTCAGTAGTGAAGCCATAACTGCGTAGCACGGTTCCACCTCCATG AGGCTGTCTTGGGTTCTTGTTTCTCAGGTGTGGTGAGCGGTCTCTTGGATCTGTGTGGTGAT CCGATCTTGCACTCCGTCACTGTGGCTGACTGCATTGTCACATTCACTTGGCGGAGGCCAAT TTCCTACAGGTGCTTTCAGGATCAGGTCACTGCGATGGTCTCTAAACACCATTCTGCTTTCTC AGGAGTACAACGGGGTGATAGAAGAATTTTTGGCAACAGGAGAGAGCTTTTTGGACCTTAT GTTTGGGGAAGGTATGACTTGCTCTTCATGCCACCGTCCTTTCCATTTGGAGGAATGGAGAA CCCTTGTCTGACCTTTGTCACCCCCTGCCTGCTAGCTGGGGACCGCTCCTTGGCAGATGTC ATCATCCATGAGATCTCCCACAGTTGGTTTGGGAACCTGGTCACCAACGCCAACTGGGGTG **AATTCTGGCTCAATGAAGGTTTCACCATGTACGCCCAGAGGAGGATCTCCACCATCCTCTTT** GACATCACTGGAGAGGAAAACCCACTCAACAAGCTCCGCGTGAAGATTGAACCAGGCGTTG ACCCGGACGACACCTATAATGAGACCCCCTACGAGAAAGGTTTCTGCTTGTCTCATACCTGG CCCACTTGGTGGGTGATCAGGATCAGTTTGACAGTTTTCTCAAGGCCTATGTGCATGAATTC AAATTCCGAAGCATCTTAGCCGATGACTTTCTGGACTTCTACTTGGAATATTTCCCTGAGCTT **AAGAAAAAGAGAGTGGATATCATTCCAGGTTTGAGTTTGATCGATGGTGAATACCCCGGTGG** CCCCGTACTCCTGATCTCTCCCCTGGGGACTCACTCATGAAGCCTGTGAAGAGCTAGCACA ATGTGGGAGCGAAGAGCTGGACTGAGCATTGAAGCGTGGCTTCTCCTGGAAGACTACCGGT **GGCTATTCGGAAAAACCCAGAATCCCTCCCCGGGTGTGAAATGGGGCATTCCCGTTTCAAG** GGAAGGGACCCGGGGGGGGATTCTTTAAAACCGTTTGGAAGCTTGCCAGGGAAAACCCCCC AGGGGGGGCCCCATTTCCCCCTTTTACTCN

GTCGACCCACGCGTCCGACTTGGCCGGGGACGCGCTGATGGGAGGATGGACATAC TGGTGTCTGAGTGCTCCGCGCGGCTGCTGCAGCAGGAAGAAGAGATTAAATCTCTGACTGC TGAAATTGACCGGTTGAAAAACTGTGGCTGTTTAGGAGCTTCTCCAAATTTGGAGCAGTTAC AAGAAGAAAATTTAAAATTAAAGTATCGACTGAATATTCTTCGAAAGAGTCTTCAGGCAGAAA GGAACAAACCAACTAAAAATATGATTAACATTATTAGCCGCCTACAAGAGGTCTTTGGTCATG CAATTAAGGCTGCATATCCAGATTTGGAAAATCCTCCTCTGCTAGTGACACCAAGTCAGCAG GCCAAGTTTGGGGACTATCAGTGTAATAGTGCTATGGGTATTTCTCAGGTGATGTATTGTCAT GACTCTTGGCTGTTTGATTTTTTAAGTATTATTATCATCATTGCCATTTACAGAAATAATACTA TTACAAGTTGTATCCTTAGTGAAAAGGACATTTGCCACAGTTTGAAAAAACTTGAGAAAGGAGT TGGGGGGGTATATGTTTTAACTTTTTTAGGCACAATTTTTAAGGTTTGGTTAAATTTTATATGT ATTCTCAATATTTAAGGGCAATCATTGGTACTCTTTTGTTTAGGTATTTCCCTCCTGCTGTGTC CAGGATTGCTGTGTGGTGGTGATGAGTGCTGGGAGGTGAAAAATTAAAATAAGCCATTTACC AGTCAGCATCCCAATTAAATATTTGATGTAACTGTGATCTTTGAGCCAGGCTTATATATTCATT TTCAAGCAGAGGAGTTCCCCATTTTAAATAGAGGCATTGTCTGATGTGTTTATGGTTAACTGC ATCTGGCTTGGGTCTTTCTTTCCTTTCTTTGCTGAATTAGAAGGGGGTTACTCTGAAGAGT CCAGGTCTTACAGTGTGGTTT

NCTAATTTAGAAGGTTGTTTACAAACCCTTTGGAAAGGAATCTTTTATTTCCCAATTTA AAAGGGGTTTGGATTTCCTTAAGAAGAGGCAAAATTTTTTTGTGTGGGACCCATGCATAAAAA CTTTTCCAAATCAAGGATAAATATCTTACGCACGATATCTAGTGACAGAGGAGAAAGTGGAAA ATGACCTCAAGGAAGCTACGGGCACAACTGGAAGCTTTGTAGAAATTAAACATATTCAAGGA GCAAGAAATGAACTTTCAGCAGTCTAAATTTTCTAAATAACCAATAGTTGCCAATCTAAAATG GCAGAGAAGATGAAATTTGATAAACTGAATTTTTTTTAAAAATCCATTTACCCTACAGGTTTGC CAATAAATTCTAAATTACAAAGGTAAGAGAAAACCTAGTACATTACTAAATATATAAAGTATAT GTTCTGATTATGTATACTTGTTCTAGTGTCAAGTCTTTTTAAGTGGGTTTTTAAAAGTTTGTTA TTGGACTTGAATGGATTTTTGAGACTAGGTTAATTATTTTTGAGGTCTTATCCTAAAAGGCATC TAAGGTACATGAATGGAGTATGGTGATTTTATAACATTTTTTATCAGAATGGAAAAAGAACTG TTTAAAAGTTTGATACTTTTAAATAGTTGGTTTTTTTGCTTACTCTGGTAATGATTTTCTACAAA TACATAATAAATTGTTTTTTGATTCTATATTCTGTATGCAGTTGAATATCCATTACTTATTCTG CTGTGCTTTAATAGAATGGAATGTTTACAGGCCCTTAAAATATTATTTTTAAAAAACCTTCTGA AGATACATACCAAAGTTTTTCCAAGAAGATTTTATAATCAATTTAATAATGTAAGGTTTATCAG ATTCTATAATAGTATAGTTATTAAGGCAATTTTATGTTAGAGACTATTTTGTAATGTAGTGAGT

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acgCGTCCGCGgtcGCGTGGGTGAGCCATGTACTTCAAACAGAAGGCAGCCAATTACT AACTTCTĞGTTGCTAGĞTGTGGCTTCCTTTAAAATCCTATAAAATCAGAAGCCCAAGTCTCCA CTGCCAGTGTGAAATCTTCAGAGAAGAATTTCTCTTTAGTTCTTTTGCAAGAAGGTAGAGATAA AGACACTTTTTCAAAAATGGCAATGGTATCAGAATTCCTCAAGCAGGCCTGGTTTATTGAAAA TGAAGAGCAGGAATATGTTCAAACTGTGAAGTCATCCAAAGGTGGTCCCGGATCAGCGGTG AGCCCCTATCCTACCTTCAATCCATCCTCGGATGTCGCTGCCTTGCATAAGGCCATAATGGT AACAGATCAAAGCAGCATATCTCCAGGAAACAGGAAAGCCCCTGGATGAAACACTGAAGAAA GCCCTTACAGGTCACCTTGAGGAGGTTGTTTTAGCTCTGCTAAAAACTCCAGCGCAATTTGA TGCTGATGAACTTCGTGCTGCCATGAAGGGCCTTGGAACTGATGAAGATACTCTAATTGAGA TTTTGGCATCAAGAACTAACAAAGAAATCAGAGACATTAACAGGGTCTACAGAGAGGAACTG AAGAGAGATCTGGCCAAAGACATAACCTCAGACACATCTGGAGATTTTCGGAACGCTTTGCT ATGCCAGGGCCTTGTATGAAGCAGGAGAAAGGAGAAAGGGGACAGACGTAAACGTGTTCAA TACCATCCTTACCACCAGAAGCTATCCACAACTTCGCAGAGTGTTTCAGAAATACACCAAGTA CAGTAAGCATGACATGAACAAGTTCTGGACCTGGAGTTGAAAGGTGACATTGAGAAATGCC GCCATGAAAGGTGTTGGAACTCGCCATAAGGCATTGATCAGGATTATGGTTTCCCGTTCTGA AATTGACATGAATGATATCAAAGCATTCTATCAGAAGATGTATGGTATCTCCCTTTGCCAAGC CATCCTGGATGAAACCAAAGGAGATTATGAGAAAATCCTGGTGGCTCTTTGTGGAGGAAACT AAACATTCCCTTGATGGTCTCAAGCTATGATCAGAAGACTTTAATTATATTTTCATCCTATA AGCCTTTAAATCATTTTTATATTATAACTCTGTATAATAGAGATAAGTCCATTTTTTAAAAATGT TTTCCCCAAACCATAAAACCCTATACAAGTTGTTCTAGTAACAATACATGAGAAAGATGTCTA aaaggggggggccgcgcaaaaaaatatccccgcgggggggccgaagaaaaaacaacgcgcgctccccacgattgttctctggt ggggaagcacaataatgggagaaacaacctcgcgcccagacaacaatgatatgccaacacgcccctcagcaggagacactataat gacacacttttgcgacccaccacgagcgtgctaagtgaccataacgaaacaacagtacttattttacccacgcgagggcacctcgatg 

## Table 4

ateaceacagegecagecacagacaceacaatggcaacgeceaccacegacacteceacacacacegeatgacacgcatececacaagea

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ACATGTTGGAAGGGTTTTTAAAATGTTTTGAAACTGTGCACAGGCCAAACCCAACTTT
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CTGAGAAGTTGAAAGCAGTGTGTGAATGGGGTGTTCTTTTCTCCCACACAATCCTTTCCCATC
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AGCCCTCAGCCTTCTTGGAGATCAGAGCCATGGTCCTCACCCACAGCACATGGG
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AGAAAACCCCTGTGTGTCCTAGCACAATATGGGCATTTGTGTGGATTTAATAAATGGGCATTT
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GATGACAAAATATTTACATAATGTTATAGATGTGGCTTGCTAATGGAAATACCTATCTGAGGC
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>758

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TTGATATTGCTCATTTTCCTCATTTCCAACATTGTTTTAAAAC
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ACAGATATAAAAAGGCTACTATTCCAAGAACAAAATCCTGGAAACAAATGTCTATCAA GAAAGCAAAGATAATCTAAACAGCAGCATATTCATAGGATGACAAACTATTCAACCATTATAA AGAAAACCGAATCAAAAGCACTGGCTTATTAGACAAGAGTTTCCCAAACTATCATGCTAAAAC

## Table 4

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ACTTATTTTTTACTAAGGTTTTGTTTTGGAGACTTGTTTGAAATAAAGTGATCCTCAT
TCAGGATTTAGAAACAAAAGTTATACTCCACATGCTAGGGATTAGGAAGGCTAATGTGAACT
GATCAAAAGTATGAATTATGGAATGCCTTTAGAATAATCAACTTTTAGGTAATTTGATACTGCT
ATAATTTCAAGCTTAGAGAAAAGTTGTAAGAATGGCATAAGGAACTCCTATATATCCTTTATCT
AGATTCACTAAATGTTCATTTTGTGCCATTTGTGTTATTCTTTGTCTCATCCTAGCCCAGTCAG
CCTAACACCACCAGGGATAAACCAGTAGTCTGAN
>770

AAGGGACTTGAGGGCTACAGCTGCTCATCTGGAAAGAATCCTTGTAAGACCAGTCCTCTGTC CAACCAGAGTTAGGAGGCATCTGACAATTTGCCTGATTAGCTGT >771

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NNNNNNNNNNNNNNNNNNNNNNNNNNNNNGGNCTGCCGTGGAGAGGATGGATGGGA GGGGGAAGAACNAGAGCTTTGTTTAGAGGCTGTTGTAGTAATCCAGGTAAAGGCTTTTAATC ATGTCCTGAACAATGATCAGCAATGGCAATGGAGATGACAGAACAGAATTTAAGAAGGAATA AAAAAGGCTTGCTGACTACTTGGATGTGGGTGATGCTATCCTTTGACACAAAGGANNNNN >777

NNNNCCGCGGCGGCTGCTGCTGCAGTGGGACAGGTGGCGGCGACCGGCGGC GTCCGAGGAGATTTAATCCAGAGACTGACTTCACTATAGAACCCACAGTTGTATCAATGGTT GGGGAAAGATAGTGGCAACAGGCAAAGGAGAAACAGCTCTGACATACAAAGAAAATGAGTA TGCTAAAGCCAAGTGGGCTTAAGGCCCCCACCAAGATCCTGAAGCCTGGAAGCACAGCTCT GAAGACACCTACGGCTGTTGTAGCTCCAGTAGAAAAACCATATCCAGTGAAAAAGCATCAA GCACTCCATCATCTGAGACTCAGGAGGAATTTGTGGATGACTTTCGAGTTGGGGAGCGAGT TTGGGTGAATGGAAATAAGCCTGGATTTATCCAGTTTCTTGGAGAAACCCAGTTTGCACCAG GCCAGTGGGCTGGAATTGTTTTAGATGAACCCATAGGCAAGAACGATGGTTCGGTGGCAGG AGTTCGGTATTTCCAGTGTGAACCTTTAAAGGGCATATTTACCCGACCTTCAAAGTTAACAAG TCACCGCTGTGCACTTCTACGGCCAGCATGGTGTCTTCCTCCCCCTCCACCCCTTCAAACAT CCCTCAGAAACCATCACAGCCAGCAGCAAAGGAACCTTCAGCTACGCCTCCGATCAGCAAC CGGTTTCTTGGGGAGACCGACTTTGCCAAGGGGGAGTGGTGTGGCGTGGAGTTAGATGAG CCACTTGGGAAGAATGATGGCGCTGTTGCTGGAACAAGGTATTTTCAGTGTCAACCCAAATA TGGCTTGTTCGCTCCTGTCCACAAAGTTACCAAGATTGGCTTCCCTTCCACTACACCAGCCA AAGCCAAGGCCAACGCAGTGAGGCGAGTGATGGCGACCACGTCCGCCAGCCTGAAGCGCA GCCCTTCTGCCTCTCCCTCAGCTCCATGAGCTCAGTGGCCTCCTCTGTGAGCAGCAGGCC CAGTCGGACAGGACTATTGACTGAAACCTCCTCCCGTTACGCCAGGAAGATCTCCGGTACC ACTGCCCTCCAGGAGGCCCTGAAGGAGAAGCAGCACATTGAGCAGCTGCTGGCGGAA CGGGATCTGGAGAGGCGGAGGTGGCCAAGGCCACGAGCCACGTGGGGGAGATAGAGCA GGAGCTAGCTCTGGCCCGGGACGGACATGACCAGCATGTCCTGGAATTGGAAGCCAAAATG GACCAGCTGCGAACAATGGTGGAAGCTGCTGACAGGGAGAAGGTGGAGCTTCTCAACCAG CTTGAAGAGGAAAAGGAAGGTTGAGGACCTTCAGTTCCGGGTTGAAGAAGAATCAATTAC CAAAGGTGATCTTGAGACGCAGACCAAACTGGAGCATGCCCGCATTAAGGAGCTTGAACAG AGCCTGCTCTTTGAAAAGACCAAAGCTGACAAACTCCAGAGGGAGTTAGAAGACACTAGGG TGGCTACAGTTTCAGAAAAGTCACGTATAATGGAACTGGAGAAAGACCTAGCATTGAGAGTA CAGGAAGTAGCTGAGCTCCGAAGAAGGCTAGAGTCCAATAAGCCTGCTGGGGATGTGGACA TGTCACTTTCCCTTTTGCAAGAGATAAGCTCTTTGCAAGAAAAGTTAGAAGTCACCCGTACTG ACCACCAGAGAGAAATAACTTCTCTGAAGGAGCATTTTGGAGCCCGGGAAGAACTCATCAG **AAGGAGATAAAGGCTCTGTATACCGCCACGGAAAAGCTTTCCAAAGAGAACGAGTCATTGAA** AAGCAAGCTGGAGCATGCCAACAAAGAGAACTCAGATGTGATAGCTCTATGGAAGTCCAAAC TGGAGACTGCCATCGCATCCCACCAGCAGGCGATGGAAGAACTGAAGGTATCTTTCAGCAA

AGGGCTTGGAACAGAGACGGCAGAATTTGCTGAACTAAAAACACAAATAGAGAAAATGAGAC TAGATTACCAACACGAAATAGAAAATTTGCAGAATCAACAAGACTCTGAACGGGCTGCCCAT GCTAAAGAGATGGAAGCCTTGAGGGCTAAACTGATGAAAGTTATTAAAGAAAAGGAAAACAG TCTGGAAGCCATCAGGTCGAAACTGGACAAAGCAGAAGACCAGCATCTCGTAGAAATGGAA GACACGTTAAACAAATTACAGGAAGCTGAAATAAAGGTAAAGGAGCTAGAGGTACTGCAAGC CAAATGCAATGAACAAACCAAGGTTATTGATAATTTTACATCACAGCTCAAGGCTACTGAAGA AAAGCTCTTGGATCTTGATGCACTTCGGAAAGCCAGTTCCGAAGGTAAATCGGAAATGAAGA AACTTAGACAGCAGCTTGAGGCAGCTGAGAAACAGATTAAACATTTAGAGATTGAAAAGAAT GCTGAAAGTAGCAAGGCTAGTAGCATTACCAGAGAGCTCCAGGGGAGAGAGCTAAAGCTTA CTAACCTTCAGGAAAATTTGAGTGAAGTCAGTCAAGTGAAAGAGACTTTGGAAAAAAGAACTT CAGATTTTGAAAGAAAGTTTGCTGAAGCTTCAGAGGAGGCAGTCTCTGTTCAGAGAAGTAT GCAAGAACTGTAAATAAGTTACACCAAAAGGAGGAACAGTTTAACATGCTGTCTTCTGACTT GGAGAAGCTGAGAGAAAACTTAGCAGATATGGAGGCAAAATTTAGAGAGAAAAGATGAGAGA GAAGAGCAGCTGATAAAGGCAAAGGAAAAACTGGAAAATGACATTGCAGAAATAATGAAGAT ATGTAGAAGAATTACAGCTAAAACTTACAAAGGCTAATGAAAATGCAAGTTTTCTGCAAAAAA **GTATTGAGGACATGACTGTCAAAGCTGAACAGAGCCAGCAAGAAGCAGCTAAAAAGCATGA** GGAAGAAAGAAGAATTGGAGAGGAAATTGTCGGACCTGGAAAAGAAAATGGAAACAAGC CACAACCAGTGTCAGGAGCTGAAAGCCAGGTATGAGAGAGCCACTTCTGAGACAAAAACCA AGCATGAAGAAATCCTACAGAACCTCCAGAAGACGCTGCTGGACACAGAGGACAAGCTGAA GGGCGCACGGAGAGAACAGTGGCTTGCTGCAGGAGCTGGAGGAGCTGAGAAAGCAAG CCGACAAAGCCAAAGCTGCTCAAACAGCGGAAGATGCCATGCAGATAATGGAACAGATGAC CAGAATGAATTGGACACACTTAAAGAAAACAACTTGAAAAATGTGGAAGAGCTGAACAAATC AAAGCAGCAGCAGCTCAGAAGTCCCAGCAGCTTTCAGCGTTGCAAGAAGAGAACGTTAAA CTTGCTGAGGAGCTGGGGAGAAGCAGGGACGAAGTCACAAGTCACAAAAGCTGGAAGAA GAAAGATCTGTGCTCAATAATCAGTTGTTAGAAATGAAAAAAAGAGAAATCCAAGTTCATAAAA GACGCAGATGAAGAGAAAGCTTCCTTGCAGAAATCCATCAGTATAACTAGTGCCTTACTCAC AGAAAAGGATGCCGAGCTGGAGAAACTGAGAAATGAGGTCACAGTGCTCAGGGGAGAAAAC GCCTCTGCCAAGTCCTTGCATTCAGTTGTTCAGACTCTAGAGTCTGATAAGGTGAAGCTCGA GCTCAAGGTAAAGAACTTGGAGCTTCAACTCAAAGAAAACAAGAGGCAGCTCAGCAGCTCCT CCTAAATTCAGTAATAGTGGACCTTCAAAGGAAGAATCAAGACCTCAAGATGAAGGTGGAGA TGATGTCAGAAGCAGCCCTGAATGGGAACGGGGATGACCTAAACAATTATGACAGTGATGAT CAGGAGAAACAGTCCAAGAAGAAACCTCGCCTCTTCTGTGACATTTGTGACTGCTTTGATCT CCACGACACAGAGGATTGTCCTACCCAGGCACAGATGTCAGAGGACCCTCCCCATTCCACA CACCATGGCAGTCGGGGTGAGGAACGCCCATACTGTGAAATCTGTGAGATGTTTGGACACT GGGCCACCAACTGCAATGACGACGAAACCTTCTGATGAAGCCTCCAGTGGAGAACTGGGCT GAACTCATGTTATTTTTAACCCCGTCAACAAATCTAGGAAAATATTTTGATCTTCAACAAATT GCCCTTTAGTCTCCCCGTATGAGTTAGAATAATAAATATTTAGTAGGTGAGTTTTCACCTCGA ATTTTGTTTTCTTGATTTTTACGTTTGAAGACATTGCACCAGATGCCATTACATTTATTGGCCC CCCGACCTTGTAGAAAAACCCCTACCCTCACAATACCTTATTTAAGTAACTTTAAATTATGCC **GTTACTTTTCATATTTGCACTAAGATATTTCCAGGCTGCATTTGTATATTTAGATTTTTTGGTTA** AGCTTTGACACTGGAATGAGTTGAAAAAATGTGCCATTTTGCATTTTCATCTACTCATTTAAAG TATTTTATTCTTATTCAAAGAAATATCTGAGCTCTTTGCACTACCTGTTATCAGTAGTGCCTTT **AAGCCCCAAACTGCTGTGGGGACATTTTATAATCTATATGCTGCACCCACTTAATCTACTGT AAAAGAAAACACTTAAAATGATCATTAGGACATAACAGACTAGGCCAGACATAGCATCTTGTG GCTTTGCAACCATTTTCATTTGTTTGTTTTCCTTTTATTTCTTCACCAGATTTAAATAACTGGAG** GAATTTTCTCCAATTTTTTTTCCTTCTCGGCAGGTATCCCCAGCAGTCAATTAACAATAAGC CAGTATAAAACACCTAAATAACCAATCTACAATCTCCCTTCACAAGTTTTTTACTGTTTTTAG ATGAATGTACGATGAGAAATTCAACGTTAATAATTTTTGGATTTTCTTATCACAAAAAAGAAAAT

AGTCTTTATCTGTTAGAGATATACATTGAAGTATTTAAAGGTGAATGATATGTTTGGG ATTTACTTTAAAATAATTTCAGCCCCCGCCAAAAGAGTAAGGTGTTGGGGGAGGGGAAGTATA AGTAAAATAAGAATGGTGGACTATTGATAATTATTGAAGTTAGGCGGGAATACACACAGGAA CTCATGATACTATTCTTACTATTTTTTGGTATGTTAAAAAAATTTCCTTAATAAGGAGTTTTTATT AATACCAGTTCTTCACATAGTCCTCCAAAAAAAATAGAAGAGGGGGGAATACTTCCCAGCTTCT TCTGTGAAGCTAGTATTATCCTGATAACCAGCACCAAAGACATGACTGCTTACTGCAACTCG GAGCTGCCCGGCTGCTGCTGCTGCTGTTGTGCCTGCCGGCCGTGTGGGGTGACTGT GGCCTTCCCCAGATGTACCTAATGCCCAGCCAGCTTTGGAAGGCCGTACAAGTTTTCCCG AGGATACTGTAATAACGTACAAATGTGAAGAAAGCTTTGTGAATTCCTGGCGAGAAGGACTC AGTGATCTGCCTTAAGGGCAGTCAATGGTCAGATATTGACACGAGTTCTGCAATCGTAGCTG CGAGGTGCCAACAAGGCTAAATTCTGCATCCCTCAAACAGCCTTATATCACTCAGAATTATTT TCCAGTCGGTACTGTTGTGGAATATGAGTGCCGTCCAGGTTACAGAAGAGAACCTTCTCTAT CACCAAAACTAACTTGCCTTCAGAATTCAAAATGGTCCACAGCAGTCGAATCTCGTCCCACA CCGCACAATCATGCCCTAATCCGGCGAGAAATACGAAATGGTCAGCATCGCATGTACCAGG TGCCATATTCATCCGGTGCAACATCTCCTTCTCATGTAACACAGGGTACAAATTATTTGGCTC GACTTCCTAGTCAACGTCTTACTTCCAGGCAGCTACTGTCCAAGTGGAGCTGACACGTTGCC AGAGTGCAGAAAACTTCAATTGTCCAAGAAACAGCACAACTCGACCATCCGAATAATCCACG CACCCGGACTGCGGACACCCACCCTCTCTCGTGCACCGTACCATACGCTTCAACACATCG TTACACTGCCACCCTCTATAGCAGCCGCCACCCCCACAACCCGGCGTCGCACCCTAGTCC CAAGCACCACCACTTCCCACAACACTCCCCCCTTTCGGTACACACTACAAAACCCACC CCACCAAATGCTCAGCCAACACGGAGTACACCTGTTCCCAGGACAACCAAGCATTTTCATGA AACAACCCAAATAAAGGAAGTGGAACCACTTCAGGTACTACCCGTCTTCTATCTGGGTTCT CGTCCCTGTCACCCCAGGCTGGTATGCGGTGGGTGTGATCGTAGCTCACTGCAGTCTCGAA CTCCTGGGTTCAAGCGATCCTTCCACTTCAGCCTCCCAAGTAGCTGGTACTACAGGTGTGTG CCACGACACCCGGCTAAGTTTTTGAAATTTATTTTTTGTAGAGACAGGATTTTCCTATGTTGC CCAGGCTGGTTTCAAACTCCTGGCCGTAAGCGATTTTTCCGGCCTCCCAAAACGTTGCGATT ATAAGTGTGAGCCACTGCACCTGGCCCCACATTTTCTTTATCCATTTGTACATTGATGGACAC NNNNNNNNN

GGGAGGCCGAGCCGGGCGCCCCGGCCCCGCGTCTAGTTGTTCATGAAGCATGTCG GCCACCAGCGTGGACACCCAGAGAACAAAAGGACAAGATAATAAAGTACAAAATGGTTCGTT ACATCAGAAGGATACAGTTCATGACAATGACTTTGAGCCCTACCTTACTGGACAGTCAAATC AGAGTAACAGTTACCCCTCAATGAGCGACCCCTACCTGTCCAGCTATTACCCGCCGTCCATT GGATTTCCTTACTCCCTCAATGAGGCTCCGTGGTCTACTGCAGGGGACCCTCCGATTCCATA CCTCACCACCTACGGACAGCTCAGTAACGGAGACCATCATTTTATGCACGATGCTGTTTTTG GGCAGCCTGGGGGCCTGGGGAACAACATCTATCAGCACAGGTTCAATTTTTTCCCTGAAAA CCCTGCGTTCTCAGCATGGGGGACAAGTGGGTCTCAAGGTCAGCAGACCCAGAGCTCCGC GTATGGGAGCAGCTACACCTACCCCCGAGCTCCCTGGGTGGCACGGTGGTTGATGGGCA GCCAGGCTTTCACAGCGACACCCTCAGCAAGGCCCCCTCCACCCATAAAGCATAACATGGA CATTGGCACCTGGGATAACAAGGGGCCTGTGCCGAAGGCCCCAGTCCCCCAGCAGGCACC CTCTCCACAGGCTGCCCCACAGCCCCAGCAGGTGGCTCAGCCTCTCCCAGCACAGCCCCC AGCTTTGGCTCAACCGCAGTATCAGAGCCCTCAGCAGCCACCCCAGACCCGCTGGGTTGCC CCACGCAACAGAAACGCGGCGTTTGGGCAGAGCGGAGGGGGCTGGCAGCGATAGCAACTCT CCTGGAAACGTCCAGCCTAATTCTGCCCCCAGCGTCGAATCCCACCCCGTCCTTGAAAAACT GAAGGCTGCTCACAGCTACAACCCGAAAGAGTTTGAGTGGAATCTGAAAAGCGGGCGTGTG TTCATCATCAAGAGCTACTCTGAGGACGACATCCACCGCTCCATTAAGTACTCCATCTGGTG TAGCACAGAGCACGGCAACAAGCGCCTGGACAGCGCCTTCCGCTGCATGAGCAGCAAGGG GCCCGTCTACCTGCTCTTCAGCGTCAATGGGAGTGGGCATTTTTGTGGGGTGGCCGAGATG **AAGTCCCCGTGGACTACGGCACCAGTGCCGGGGTCTGGTCTCAGGACAAGTGGAAGGGG** AAGTTTGATGTCCAGTGGATTTTTGTTAAGGATGTACCCAATAACCAGCTCCGGCACATCAG GCTGGAGAATAACGACAACCAGGTCACAAACTCCCGGGACACCCAGGAGGTGCCCTTA GAAAAAGCCAAGCAAGTGCTGAAAATTATCAGTTCCTACAAGCACACAACCTCCATCTTCGA CGACTTTGCTCACTACGAGAAGCGCCAGGAGGAGGAGGAGGAGGTGGTGCGCAAGGAACGGCA GAGTCGAAACAACAATGAGGGCGAACCAGTTTCTTACATGTTCTAACGTTTGACTTTGAAAA CAGTTTAAAACACGTGTGCTTGGTCAGCTCCAGTGTGTCCCCGTGCGGGGGTTGAGTGT AGACTGATCTAATGTGAAATGTAAGTATCCTTAAAAACAAAGCATCTATTTTGGCAGAAATTG TGTTCTTAAATTCAGTCATTTGATATTCTGTGAGACTTCATATTTCTCATCCCTTTATTGCTTTT TAGCAAACATAAGAAACCATGAGTCATTTTGTCATTTAGAGTATTCTGATAAAATCTCTTGAAA ATACTGAAATCAAAAGGTTAATGATTTTTTGTTCATTCTGATTTGTCATTTTATTATCTGTTATC **GGTCTAAAGTGCTAATTTACCCATTTGATTTTTCTGCTAGACAGATAACTTTTAATTTTTCAAA** GCCACCGTCCCTCACTGTCCTGGTGTCCGATTGGGCTGGATGGTGTTGGGGCATGATGTG TGGAGGAACTGGAAGGTGCTTTAGGTCTGGTTCAGGGTCGGGCATTCTTTGTTGTTTGCACA TCTTTTTAAATTTTACACCTTTTCTTAAGAATTCTAATGCCGTCTTAAGTTTTTATACCAATAAT AAATTTCATCGTGTGTGTCTAATTTTTTTCCTGTTGAATGGGTAAAAACAAAACAAAACTTTT TTTAGAAGATGAATTTGCTGTCATGTTTTGTGGAATGAGGGACCGTTGAGCTCACTACCACC TGGAGTTTGAGTTGAAGCATGAAAATGGTGCCCATGCCTGACGCTCCAGCGCCTGGATCTG CACGTGCCCTTGTAGAGGATCCTTACCGTCCTAGAGAGCAGACGCTTTCTGAAAACTACTTG CTCCAAAAGACCCTCTGAGTTAACGTTTCAGCTGTATCATTAGACTTGTATTTAGAGCGTGTC **ACTTCCTCTGAACTGTTACTGCCTGAATGGAGTCCTGGACGACATTGGGTTTTTCCTCTAGG** CCAGGGGGGCCCGGTACCCAATTCGCCCTATAGTGAGTCGTATTACAATTCACTGGCCGT **CGTTTTACAACGTCGTGACNNNN** >781

GGGGGCTAAGGTTCTCTACCTCGGGGCTGTCTCGGGCACCACGGTCTCCCATGTCTCTGAC ATCGTTGGTCCGGATGGTCTAGTCTATGCAGTCGAGTTCTCCCACCGCTCTGGCCGTGACC TCATTAACTTGGCCAAGAAGAGGACCAACATCATTCCTGTGATCGAGGATGCTCGACACCCA CCAGACCCGGATTGTGGCCCTGAATGCCCACACCTTCCTGCGTAATGGAGGACACTTTGTG ATTTCCATTAAGGCCAACTGCATTGACTCCACAGCCTCAGCCGAGGCCGTGTTTGCCTCCGA AGTGAAAAAGATGCAACAGGAGAACATGAAGCCGCAGGAGCAGTTGACCCTTGAGCCATAT GAAAGAGACCATGCCGTGGTCGTGGGAGTGTACAGGCCACCCCCAAGGTGAAGAACTGA AGTTCAGCGCTGTCAGGATTGCGAGAGATGTGTTGATACTGctgtggtttgaatgttccctccaacactc atgttgagacttaatccctaatgtggcaatactgaaaggtggggcctTTGAGATGTGATTGGATCGTAAGGCTGTGC CTTCATTCATGGGTTAATGGATTAATGGGTTATCACAGGAATGGGACTGGTGGCTTTATAAG AAGAGGAAAAGAGAACTGAGCTAGCATGCCCAGCCCACAGAGAGCCTCCACTAGAGTGATG CTAAGTGGAAATGTGAGGTGCAGCTGCCACAGAGGGCCCCCACCAGGGAAATGTCTAGTGT CTAGTGGATCCAGGCCACAGGAAAGAGTGCCTTGTGGAGCGCTGGGAGCAGGACCTGACC ACCACCAGGACCCCAGAACTGTGGAGTCAGTGGCAGCATGCAGCGCCCCCTTGGGAAAGC TTTAGGCACCAGCCTGCAACCCATTCGAGCAGCCACGTAGGCTGCACCCAGCAAAGCCACA GGCACGGGCTACCTGAGGCCTTGGGGGCCCAATCCCTGCTCCAGTGTGTCCGTGAGGCA GCACACGAAGTCAAAAGAGATTATTCTCTTCCCACAGATACCTTTTCTCTCCCATGACCctttaA CAGCATCTGCTTCATTCCCCTCACCTTCCCAGGCTGATCTGAGGTAAActttGaagaaaaTAAAAG CTgtgtttgagca >782

NNACAGAGAGTGGTACATGAATGACTAGTTTTCTAAGATGTCCTTTTTATTGTGAATA AAATATAAAAGTTAAAGGCCCTCTGCTAAGTCACATAAAGTACAGCATATAAGTTCATATAGG TACAAATAAATGAGTTTGCAGTGAATTGGGCCTTCAAATTACCTCAAGTGACAGATAGTAAGA AAAGCTTCTTGAGCAGGTGGAGGTCACTGAATCCCCTACTATGCACTTATCAAGATTTTACTT ACTTTAATTTACTGGAAATTGATTTTTTAAAAAATGACTACACTGTAACAAGGGAAGGGATCT GGGTTTTTTGTTGTTTATTCTTGTTTTTTTAAGTAGTTCAAATTCTGAAACTGTGATTTAAA AATTTTTTACAGTCAAGCATTCTGATTTTGAACATAACTCCCTTCCCTTTCTGTGTAACAAAGG CTGTCATTGTCTATGGATGTTTACCTCTCTGTTCTCCTAAAAGTTTGAAGATTAGGTCAACTCT GCTGACGTATTTTTATACTCAAGTGTAGTTTTCTATTAAAAAGAAAAGTGGTTGGATTAAAAAT AGTAAGCTATGTAACCCTCATGTTACTTTCACTTTCAAATATTGGGTACCTAAAACATTACTTC AGAGATTATGTAATCCTATTATAGTATGTTTGCTTTCCTTTATTGTTGGATTTTACATTCTGATT TGGCTTTCCTCCAAAAAATGTATATCATGAAAGACTAGACAGTTATTTGCAAGTGTTTAGAAA GGTGTTAAAAATGTAAAGCAAAGAGTCTTAACTTTCTCCTAATTGGGAGAAAAATGCTTTAAC ATTACTATAATAATATTCCAGGTTTGGAGGGGGTCTCCAGGCCCCATATTTGCTGTTAATAGT TGGACCTTTTAGACCATGTGTTATTTGCAATCCCAGAATGATTGCTTCTGCTATTAGTTAAAAA GATACTATTCTTTCTGTACAAGTGCAATACTCCCCTTGAAGTCTTAAAAACTATGGTGA TTTTTTTTTCTTTCTGACCTATTCTTCCTTTAGCTAATGACAAAAAGAAACTCATAAAAGTCAT AGTATGTTAAAGGACACAACAAGCAAAGAGAAAAACACTCCACAATCAAAAGATTACAGAAT GTGGAAACCACTAGTCTGATCTCATGGTATCTTTATTTAAGCTAAATTTCCATGGAAATTAGTA **ATCTTTTGCTTGAAAAATGTGTCCTAAAGTTGAACTTTTTACAGATTGAATCTTCTTAGACCCT** CGCCCAATGCTCTAAATTAAGAACCTAATACTTAATATTTTTATTTTACTTCTCCCCTTTTAGAA ATAAACTTTTAAATAAAAGCAAAGCACTTAGCTGAGTTTTAAACACTTACATATCACCTATTGG TTTCTTATACATATTTATATGTAGTGTGCTAATTTTCTTTTTTTATACCTGTGTCCCTGTAGTAA AACTGCTGTAATATAAATACATGTTTTGTTAAAAGATAACATTTCTTTGGCATTTCTTTTAAAG ACAATACCAAAGGTAATTAGACTATTTTAAAGACTAATTGCTTGACAGTTTCTAGGGTATTTTG **TGTTTTAGAANNNNNNNNNNNNNNNNN** >783

ATTATTTTATATGTTATGTATATTTTAGGAGACAATGAACATTTGTCTGTATCTGAA
TCAACTGTACCACCAAAAAGTGTGTGCCACACTGCATTGGCCTGGGACATAAAACTGGAAG
CTAAACCTAGTATATTTTCCTTACATCCTCTGGGTACCAGGAGTCATGTTTGACAGCTTCTCT
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>785

GAAACTCCTTTACACTCTCCAGCCTCTCACCGCAAAATTACACACCCCAGTACACCAGCAGA GGAAACTTATAACCTCGGGAGGCAGGTCCTTCCCCTCAGTGCGGTCACATACTTCCAGAAG AGCGGACCAGGGCTGCCAGCACCTGCCACTCAGAGCGCCTCTGTCGCTGGGACCCTT **GGTATCTTTGTGGTCCACATCGCTACTGTTATTATGCTATTTGTTAGCACCATTGCCAATGTC** TGGTTGGTTTCCAATACGGTAGATGCATCAGTAGGTCTTTGGAAAAACTGTACCAACATTAG CTGCAGTGACAGCCTGTCATATGCCAGTGAAGATGCCCTCAAGACAGTGCAGGCCTTCATG ATTCTCTCTATCATCTTCTGTGTCATTGCCCTCCTGGTCTTCGTGTTCCAGCTCTTCACCATG TTGTGGGGGTGTCCATCTACACTAGTCATTATGCGAATCGTGATGGAACGCAGTATCACCAC **GGCTATTCCTACATCCTGGGCTGGATCTGCTTCTGCTTCAGCTTCATCATCGGCGTTCTCTA** AGGAAGCCGTTGAATCTGGGAGGGAAGTGGAGGTTGCTGTACAGGAAAAACCGAGATAGG GGAGGGGGGGGGAAGCAAAGGGGGGAGGTCAAATCCCAAACCATTACTGAGGGGATT CTCTACTGCCAAGCCCCTGCCCTGGGGAGAAAGTAGTTGGCTAGTACTTTGATGCTCCCTTG ATGGGGTCCAGAGAGCCTCCCTGCAGCCACCAGACTTGGCCTCCAGCTGTTCTTAGTGACA CACACTGTCTGGGGCCCCATCAGCTGCCACAACACCAGCCCCACTTCTGGGTCATGCACTG AGGTCCACAGACCTACTGCACTGAGTTAAAATAGCGGTACAAGTTCTGGCAAGAGCAGATAC TGTCTTTGTGCTGAATACGCTAAGCCTGGAAGCCATCCTGCCCTTCTGACCCAAAGCAAAAC **ATCACATTCCAGTCTGAAGTGCCTACTGGGGGGGCTTTGGCCTGTGAGCCATTGTCCCTCTTT** GGAACAGATATTTAGCTCTGTGGAATTCAGTGACAAAATGGGAGGAGGAAAGAGAGTTTGTA AGGTCATGCTGGTGGGTTAGCTAAACCAAGAAGGAGACCTTTTCACAATGGAAAACCTGGG GGATGGTCAGAGCCCAGTCGAGACCTCACACACGGCTGTCCCTCATGGAGACCTCATGCCA TGGTCTTTGCTAGGCCTCTTGCTGAAAGCCAAGGCAGCTCTTCTGGAGGTTTCTCTAAAGTCA CTAGTGAACAATTCGGTGGTAAAAGTACCACACAAACTATGGGATCCAAGGGGCAGTCTTGC GTATACAACAGGAGAGAGATGGACATGGCTCATTGTAGCACAATCCTATTACTCTTCCTCTAA CATTTTTGAGGAAGTTTTGTCTAATTATCAATATTGAGGATCAGGGCTCCTAGGCTCAGTGGT **AGCTCTGGCTTAGACACCACCTGGAGTGATCACCTCTTGGGGACCCTGCCTATCCCACTTCA** 

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#### Table 4

GGCCCTTGGGTGAAAGGTGCTATATAATTGTGAAGTATTAAGCCTACCGTATTTCAGCCATG AGGTGATGGGCAGATCTTTTCTTTAAAATAAAAAGCAAAAACTCTTGTGGTACCTAGTCAGA TGGTAGACGAGCTGTCTGCCGCAGGAGCACCTCTATACAGGACTTAGAAGTAGTATGTT ATTCCTGGTTAAGCAGGCATTGCTTTGCCCTGGAGCAGCTATTTTAAGCCATCTCAGATTCT GTCTAAAGGGGTTTTTTGGGAAGACGTTTTCTTTATCGCCCTGAGAAGATCTACCCCAGGGA TCCTTTTTGGGGAGTTGTTATGCCATGATTTTTGGTATTATGTAAAAGGATTATTACTAATTC TATTTCTCTATGTTTATTCTAGTTAAGGAAATGTTGAGGGCAAGCCACCAAATTACCTAGGCT GAGGTTAGAGAGTTGGCCAGCAAAAACTGTGGGAAGATGAACTTTGTCATTATGATTTCAT TATCACATGATTATAGAAGGCTGTCTTAGTGCAAAAAACATACTTACATTTCAGACATATCCAA AGGGAATACTCACATTTTGTTAAGAAGTTGAACTATGACTGGAGTAAACCATGTATTCCCTTA TCTTTACTTTTTTCTGTGACATTTATGTCTCATGTAATTTGCATTACTCTGGTGGATTGTTCT AGTACTGTATTGGGCTTCTTCGTTAATAGATTATTTCATATACTATAATTGTAAATATTTTGATA CAAATGTTTATAACTCTAGGGATATAAAAACAGATTCTGATTCCCTTGAATGTGTGAATGTTTT TTTCTAAAAAAATGTGGAGAAATATGGATAATTATGACATTTATCCCTCATTAAGCTGCCTAT CAGTTTGATTTGGACAACTTGACATTTATTTGAGACATTAAGCTACTTTCTGGTAATATATTAG GCATTTCTGCAATAGCTCTTTCAGGTAACTGAATATTATTAAGCATAGTTTTATCTTGCTTTGA TTAAACCTCTTAGGCAAAAAATGGAACTTCATAAGCTAATACATTAGAAAGGGGTTATGATTA TAAATCAGAAATGCTTGTGACATTAAGAAATGAGGCACTTGTGAAATTTCTTTGAAATAGCCA CTTCACTACTTTCTGTGAGCAGTAAGGACTGGTATCTTTCTGTGAGCAATAAGGACTGGATAA AGACTGCATATCCTTGTGTCGTGTCAGCACCAATACAATAAGGAGGGTTTTAATGTGAAGCA GGCAATCTTCCAGCCCCTTCTGGTCTTGGATGAAATAGTTGCACAGAGTATTGCACCAAAAA TACACAATGGAGGCTGAAAAGTTCAACATATTTTAAGTCAATTAATCAAATTGCATTGATTCTT GATGCTTTCTTAGAGGCCTACATGATTTCTTAGATTGCTCTGATAAACTATCATAAGGGGTCC ACCTCCCTCATTTAGCTCCCCCAGGGATTTCTTTTCCCCCATGTCATACACCCAGTCCTAAA TCAACCCCAAGGCTATCCTTCCATCCCTTCTGCAGAGGGAACTTTTGTCAGACTCTGCAAC **AAACTCCTAGCTCTATCCAGAGTGTCCTCTGCTGCTAAGATTGGTATCTTTCTCCTCAAAAGC** CTGGATGGTGAATGGGGGTGCATTAGTCAGAATTCTCCAGAGAAAACAGAAAAAATAAGATTC >788

ACTITAATITCTTTATAATTTGTTCAGCTATITAAAAAGATAATCCACAATCTCCTACC GCCATTAGAGCACAGGAAAAAAAATTCAAAAATAAAGGAAAAACATGGCTCATATATCTACA GAAGTCACAAAAATACTATAGGGCACATATACCCAGGCCTCAGCGGTGGGAAGAAAACATAC AACCACCGGGCAAAATGTTTGAACACTGAAGACGGGAATTTTTTTAGGGCCATNTCAAGACCA TGTTGAAGGTAACTGGGAAAGTCCTGGATAGAAATAGANNNNN >790

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AAACCCCAAGTTTGTGGATGCTGCAGACACTCTGTGCCCCCCTGCATGCTGGGTGCCTGGC
CAGCTGCCAGGGCATAAAGACAGAGACGATGTGGCCTTTGTCCTTAAGAATGAGGTTTTGAAA
GCCCCAGTTCTTCCATGTTAGGTGATTTCTTGCAGCTCTTGGTATCTGCAGAATTAGTGTGAA
TGCTTAAAAAAATATTAACAGCTTTATATCATGAAAGTTTTAACATGN

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ACCATGTAGCTCTACTTTTCCATATACAGAGTTGTTTCCTAGCTTTCTGCTAATCTAA
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TATTATCTAATCATGATTCAAGTGACTAGGCTGTAGCACCCAAGAACCTTGCCTTAAAACAGT
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CATTTAAAAAAATAAAACAATCAGTACTAGAACTAGCATAAATAGTAATATCTAACATGATCATT
TGTATTATATAGGCATATTTAAGTAAAATGTGTTTCATTCCATTCAGTATTTCATAAAAAGGACA
GGCCTCTGGAAAATTAGTTTTACTCCTTAGGTTTTCTCATCCANN
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#### Table 4

ACTGATTATTCTCCTGCTTAGGGAGAAGCGGAAGAAGGCCCTTGGAACTGTGAGTTT
TGCATTCCAACTTGCTAATTCAACATAGATCCTAATTCCTTAAATGCTTGTAATTAGAAATTCT
CGTGAACTGTATTGGTTTTTGTCAAGCAATCTGTTTGGGGAACTTGAGCAACTGGGGCACTG
CTGGCTAGGGTGAAGTTTATTTAATTTGTTTTTATGACATTCTTCATCTTGGAAATGGGGTTTT
CAAATATTGCTTTCCCAGGCATCATTACTTATTTGCTGGTTTTTTATTTCAAGANNNNNNN
>802

CCCTTTGAGCGGCGCCCGGGCAGGTACGATAGGCATGCAATTAAAGAAGACCTGC CTCAAACATTTTCTGTGTGACCTGAGGCAAGTCCTTTTATAGCTATAAACTAGGGACAATATT TGCTGTCATTTTTTCTACAAATGTCACAAAGAACAAATTTGAGCCTGTCGCTGTGAAAGAACT TAGCAAATGAAAGCATCCTAGGGAGTGTTTTAGATATCGATATTTTTATCCAATTAACTTTTCA AAATGAAGTTATTTGCTCACTGAAACTGAAGT >803

AATTCCCATGATGTCAGACCACTGGAGTTTCCAGGGGCAACACCCCATAACCGTCC CGCTGCAGAAGAGCATCAGACGTTCAGTAAGAATGCAAAGGGTATCTCAGTGGGAACCGCG GACCAGGAGAGCTCCCAAACCAACACTGGCTAGGGCTCTCTAGGCCCTTTCAGGCTAGAT CTTGACGAGAGAAGAGTAAAGATCTTTCTGAGGTTGGTGCAACTGAGGAAACGAAAGTTTCG

GCCTCTGCTGTCAGATCTATGAAAGGAAAGAACTGTGAACTTGTCCCCTTTTGTTTTCTTTGA CTTAAAACAAAAGAAAATCACTGGAACAAAGTCTTAAAGTAATAACAGAAATGTCAGAAAAGT TGAACATCTTATGGGCACATGCGGTGAGTTACGCTAACTTATAGCATCCACTGAGATTAGCC GCATAGGATTCTTCCCATGTTAGAGCTAAAAGGACCTACTGTCCGCCAGCTGCATTGCAGN >808

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ACATTTCGTTTAGCAGTTTATCAGCTGGTGGACAATTTGGCTGTTTCCATTTTTTGGCTGTTAT
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CTAAGCTAAACTTGTTTGAAATGTAAATTCTCAGGTATTCTCAGTATAGACCTATAGATTCACT
TAGCTGGTGGGGTCCACCCAACTTCTTTTAACAAGTCCTCCAGTGGATTCTGATGCAATGCT
AACATTTGTGAACACTGTCAAAATCAAAATGGAGTCACTTGTGTTTAAAAATCCTGACAAATA
AAGCCAGGGACAGCTATGAAGAGAGGGTTCTCATGCATCAATGCCTGATTAACANAACTAT
CCCAAATGACTCTGCANAAACCACAATCCTGCACAAAGGTCATCACAAACCTTACACAAAAAAAT
ATCTTCACAAGGACANN

## Table 4

TGAAGTGGAGCTGATGAATCTGTTTTTTGTGATACTGCTGCTGCTGCGGTTTTTAACACATGC TTCAGGTGGTTCTAAGCTTAGGAAACCTTGCCCAAGGATACCATCCTGTCTCNNNNNN >814 >815

NNCGCGTTGAGGCGGCTGCAGCAGTTGCGCGCTGGGATTGTTGCGGTGCGCTGGA GCCGAATACAAAATACAGTTAAAATAAAATGTCAACCTCCTGGAGTGATCGGTTACAGAATG CAGCAGATATGCCTGCTAACATGGATAAGCATGCCCTGAAAAAGTATCGTCGAGAAGCCTAT CATCGGGTGTTTGTGAACCGAAGTTTAGCAATGGAAAAGATAAAGTGTTTTGGTTTTGATATG GATTATACCCTTGCTGTGTACAAGTCCCCAGAGTATGAGTCCCTTGGTTTTGAGCTTACTGT GGAGAGATTAGTTTCTATTGGCTATCCCCAGGAGTTGCTCAGCTTTGCTTATGATTCTACATT CCCTACCAGGGGACTTGTCTTTGACACACTGTATGGAAATCTTTTGAAAGTCGATGCCTATG GAAACCTCTTGGTCTGCACATGGATTTAACTTTATAAGGGGACCAGAAACTAGAGAACAG TATCCAAATAAATTTATCCAGCGAGATGATACTGAAAGATTTTACATTCTGAACACACTATTCA ACCTACCAGAGACCTACCTGTTGGCCTGCCTAGTAGATTTTTTTACTAATTGTCCCAGATATA CCAGTTGTGAAACAGGATTTAAAGATGGGGACCTCTTCATGTCCTACCGGAGTATGTTCCAG GATGTAAGAGATGCTGTTGACTGGGTTCATTACAAGGGCTCCCTTAAGGAAAAGACAGTTGA AAATCTTGAGAAGTATGTAGTCAAAGATGGAAAACTGCCTTTGCTTCTGAGCCGGATGAAGG AAGTAGGGAAAGTATTTCTTGCTACCAACAGTGACTATAAATATACAGATAAAATTATGACTTA CCTGTTTGACTTCCCACATGGCCCCAAGCCTGGGAGCTCCCATCGACCATGGCAGTCCTAC TTTGACTTGATCTTGGTGGATGCACGGAAACCACTCTTTTTTGGAGAAGGCACAGTACTGCG TCAGGTGGATACTAAAACTGGCAAGCTGAAAATTGGTACCTACACAGGGCCCCTACAGCATG GTATCGTCTACTCAGGAGGTTCTTCTGATACGATCTGTGACCTGTTGGGAGCCAAGGGAAAA GACATTITGTATATTGGAGATCACATTTTTGGGGACATTTTAAAATCAAAGAAACGGCAAGGG TGGCGAACTTTTTTGGTGATTCCTGAACTCGCACAGGAGCTACATGTCTGGACTGACAAGAG TTCACTTTTCGAAGAACTTCAGAGCTTGGATATTTTCTTGGCTGAACTCTACAAGCATCTTGA CAGCAGTAGCAATGAGCGTCCAGACATCAGTTCCATCCAGAGACGTATTAAGAAAGTAACTC ATGACATGGACATGTGCTATGGGATGATGGGAAGCCTGTTTCGCAGTGGCTCCCGGCAGAC CCTTTTTGCCAGTCAAGTGATGCGTTATGCTGACCTCTATGCAGCATCTTTCATCAACCTGCT GTATTACCCTTTCAGCTACCTCTTCAGGGCTGCCCATGTCTTGATGCCTCATGAATCAACGG TGGAGCACACACGTAGATATCAATGAGATGGAGTCTCCTCTTGCCACCCGGAACCGCAC ATCAGTGGATTTCAAAGACACTGACTACAAGCGGCACCAGCTGACACGGTCAATTAGTGAGA TTAAACCTCCCAACCTCTTCCCACTGGCCCCCCAGGAAATTACACACTGCCATGACGAAGAT GATGATGAAGAGGAGGAGGAGGAAGAATAAGGAGGAAAACCAAAACCCAAGCACCC ATTAAACAAGTCCTGGCAGGACTCACAGGAACAAACGAGGTCCCTGTTAGGGTTCTACTCG GGGGAGGGAGGGGCTCCATGAAAGGTACGTCTGAAAAGTTTCTGAAGATTTTATTATCATA GATACTTGTTTTGGTTTTGTGTATCTGTACTCTCTGCAGATGGTCCAAAATTGTAATGGAGTC TGTATTAGAAGAAAATAAGGGTAAAATCAGGCTGAACTGCATGTATATGGCTCCACTGTGGC TTGTGACACTTTTAAAATCATCCGTATGTCAGTGTATCTGGATACACGAGGAAAAGGAAAGA GTCTCAGAGTGGAACAAAGAGTGGGAAGAGGTGATCTGTAATGTTACAAATTGTGCTATTAC TCCAAGGTCCAACTTTTCCAGTGCATTACATGGTATTGTATATCAGTGGAGAAATGTATTATT

TCCATGATCAAATGTAGTCTCTGTTAAGGTCAAGTTTTCTTTTATAAGCCTTTAATTCATCCTC AGTGACTCTGGCAAGGCTGCTTCTCTATCACTGGCTTTGCACAGAAGTATGCTCTACTTGCG AATAGCACAAATGCTTATTTGTTATCCAAAAACAACCTCCTTCTTATCTGTGATAAATCTATAG CTTCTTATACTACAGAACATGCATTAGTGTGGGCTATATAGCTGTGGCTCATGCTACCCAATT CCAGATTTCTTTGTCCTCTAAGAGTTGATTGCTGTATATTAAAATTGAACATCAGAGGATGGG AAGAGGGCTCTGTAAGCCAGAACCTTACTAAAGTAGAGGGCACAATCAGTGTGAATAAATTC **ACTTCAGAATCTCAAGTCAAGGCCAGGCACGGCGGCTCACGCCTGTAATCCCAGCACTTTG** GGAGGCCGAGACAGGCGGATCACCTGAGGTCGGGAGTTCGAGACCAGCCTTACCAACATG GAGAAACCCCATCTCTACTAAAAATACAAAATTACCTGGGCGTGGTGGTGCATGCCTGTAAT CCCATCATCTACTCAGGAGGCTGAGGCAGGAGAATTGCTTGAACCCAGGAGGCGGAGGTTG CAGTGAGCCAGGATTGTGCCATTGCACTCCAGCCTGGGCAACAAGAACAAAACTCCATCTC CTGTGTATGTTAGGGTATTAAAACTGTTTCACCAGTACAGTGAAAGTTGTTTCAACATTTTAAA CAAACAGTGGTTATAGACTCTTTCTTTAACCATTGTATATTTTCTTCCATTCTTGTCATTGGTC **AATAGGGGAGGGTAGATTAGCTGCTCCAGAATTCAATAAAGTGTAATATTTCTAACGGTGAC** TTTGACCTATTCTGTAGTACAACTGTAATAGCTATTGGTCTTCAAGTGGGTTTAGATTTGGTG ACATCAGTTTGATATTCTCTTAAAGGAAATAAATATTCAAGAACTGATTATGTTCTAACATGAT TATATTCATGGTGTTACATAGGCCTCAATTTTTTCACAGAAAGATTTTTGGAACAGGACTGTG **AAGTGAGGCTTTTTAAAAAATTATTTTATAAGCAGAGAACACAGCCTGATAACTTAGTCAAGG ATATACTGTCTGTCTCACTACTTTGGACTTATATGGCTTCAGATTAAGTCATCCAAGAAACATA** CATACATTCTAAATGGTATATATTGGGAATATATGCCCCTTTAAAAGAATCAGGTCAGAAATG CAATAACAATTAGACTAGACTGTTGCCCGTGTTAGGAGAATGTGTGGTCATCCTAGTTACTAA TTACTCTCACTCAAGATGGAGATGTTGTCCAGTTTAACATAGTCTTAAGTTTTCTTAAACCCAA **ATAATTTATGAGTAGCTTATTACATCTGCAGAGCTACCTTATTATAATAGTACCTGCCCNNNN** >817

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>819

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TTCACTTTTCGAAGAACTTCAGAGCTTGGATATTTTCTTGGCTGAACTCTACAAGCATCTTGA CAGCAGTAGCAATGAGCGTCCAGACATCAGTTCCATCCAGAGACGTATTAAGAAAGTAACTC ATGACATGGACATGTGCTATGGGATGATGGGAAGCCTGTTTCGCAGTGGCTCCCGGCAGAC CCTTTTTGCCAGTCAAGTGATGCGTTATGCTGACCTCTATGCAGCATCTTTCATCAACCTGCT GTATTACCCTTTCAGCTACCTCTTCAGGGCTGCCCATGTCTTGATGCCTCATGAATCAACGG TGGAGCACACACGTAGATATCAATGAGATGGAGTCTCCTCTTGCCACCCGGAACCGCAC ATCAGTGGATTTCAAAGACACTGACTACAAGCGGCACCAGCTGACACGGTCAATTAGTGAGA TTAAACCTCCCAACCTCTTCCCACTGGCCCCCCAGGAAATTACACACTGCCATGACGAAGAT GATGATGAAGAGGAGGAGGAGGAAGAATAAGGAGGAAAACCAAAACCCAAGCACCC ATTAAACAAGTCCTGGCAGGACTCACAGGAACAAACGAGGTCCCTGTTAGGGTTCTACTCG GGGGAGGGAGGGGCTCCATGAAAGGTACGTCTGAAAAGTTTCTGAAGATTTTATTATCATA GATACTTGTTTTGGTTTTGTGTATCTGTACTCTCTGCAGATGGTCCAAAATTGTAATGGAGTC TGTATTAGAAGAAAATAAGGGTAAAATCAGGCTGAACTGCATGTATATGGCTCCACTGTGGC TTGTGACACTTTTAAAATCATCCGTATGTCAGTGTATCTGGATACACGAGGAAAAGGAAAGA GTCTCAGAGTGGAACAAAGAGTGGGAAGAGGTGATCTGTAATGTTACAAATTGTGCTATTAC TCCAAGGTCCAACTTTTCCAGTGCATTACATGGTATTGTATATCAGTGGAGAAATGTATTATT TCCATGATCAAATGTAGTCTCTGTTAAGGTCAAGTTTTCTTTTATAAGCCTTTAATTCATCCTC AGTGACTCTGGCAAGGCTGCTTCTCTATCACTGGCTTTGCACAGAAGTATGCTCTACTTGCG AATAGCACAAATGCTTATTTGTTATCCAAAAACAACCTCCTTCTTATCTGTGATAAATCTATAG AAAGAATTTAGCTGCAAGTGGACAAAGGAACAAGCCCCCAGAAAAGAAAAGGAAGAACTGC CTTCTTATACTACAGAACATGCATTAGTGTGGGCTATATAGCTGTGGCTCATGCTACCCAATT CCAGATTTCTTTGTCCTCTAAGAGTTGATTGCTGTATATTAAAATTGAACATCAGAGGATGGG AAGAGGGCTCTGTAAGCCAGAACCTTACTAAAGTAGAGGGCACAATCAGTGTGAATAAATTC ACTTCAGAATCTCAAGTCAAGGCCAGGCACGGCGCGCTCACGCCTGTAATCCCAGCACTTTG GGAGGCCGAGACAGGCGGATCACCTGAGGTCGGGAGTTCGAGACCAGCCTTACCAACATG GAGAAACCCCATCTCTACTAAAAATACAAAATTACCTGGGCGTGGTGGTGCATGCCTGTAAT CCCATCATCTACTCAGGAGGCTGAGGCAGGAGAATTGCTTGAACCCAGGAGGCGGAGGTTG CAGTGAGCCAGGATTGTGCCATTGCACTCCAGCCTGGGCAACAAGAACAAAACTCCATCTC CTGTGTATGTTAGGGTATTAAAACTGTTTCACCAGTACAGTGAAAGTTGTTTCAACATTTTAAA CAAACAGTGGTTATAGACTCTTTCTTTAACCATTGTATATTTTCTTCCATTCTTGTCATTGGTC AATAGGGGAGGGTAGATTAGCTGCTCCAGAATTCAATAAAGTGTAATATTTCTAACGGTGAC TTTGACCTATTCTGTAGTACAACTGTAATAGCTATTGGTCTTCAAGTGGGTTTAGATTTGGTG ACATCAGTTTGATATTCTCTTAAAGGAAATAAATATTCAAGAACTGATTATGTTCTAACATGAT TATATTCATGGTGTTACATAGGCCTCAATTTTTTCACAGAAAGATTTTTGGAACAGGACTGTG AAGTGAGGCTTTTTAAAAAATTATTTTATAAGCAGAGAACACAGCCTGATAACTTAGTCAAGG ATATACTGTCTGTCTCACTACTTTGGACTTATATGGCTTCAGATTAAGTCATCCAAGAAACATA CATACATTCTAAATGGTATATATTGGGAATATATGCCCCTTTAAAAGAATCAGGTCAGAAATG CAATAACAATTAGACTAGACTGTTGCCCGTGTTAGGAGAATGTGTGGTCATCCTAGTTACTAA TTACTCTCACTCAAGATGGAGATGTTGTCCAGTTTAACATAGTCTTAAGTTTTCTTAAACCCAA **ATAATTTATGAGTAGCTTATTACATCTGCAGAGCTACCTTATTATAATAGTACCTGCCCNNNN** >820

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>821

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GCATATAATCAGCATCTTTCCCACTAAGTGAAGGGCCCAGACTCGAGCACAGGAGCACAGC
ACCCCTTAAACTCACGAGGGGCTGCATTCACACCATCAGCAGGAGATTACACTTGTGTCAT
TTG
>823

**AACACATTTTGATATATCAAGAAAATAAATGGAAATGGGGGTGATAATTTATATTTGT AATTTACAAATCAAACATCTATCATACACTTACTATGTACGCGGGGAGAGAAAGAGGCAACTA** CATTGCCTGGAGGAAGCCTAAGGAACCCAGGCATCCAGCTGCCCACGCCTGAGTCCAAGAT TCTTCCCAGGAACACAAACGTAGGAGACCCACGCTCCTGGAAGCACCAGCCTTTATCTCTTC ACCTTCAAGTCCCCTTTCTCAAGAATCCTCTGTTCTTTGCCCTCTAAAGTCTTGGTACATCTA GGACCCAGGCATCTTGCTTTCCAGCCACAAAGAGACAGATGAAGATGCAGAAAGGAAATGT TCTCCTTATGTTTGGTCTACTATTGCATTTAGAAGCTGCAACAAATTCCAATGAGACTAGCAC CTCTGCCAACACTGGATCCAGTGTGATCTCCAGTGGAGCCAGCACACCCAACTCTGGG TCCAGTGTGACCTCCAGTGGGGTCAGCACCACCATCTCAGGGTCCAGCGTGACCTCCA ATGGGGTCAGCATAGTCACCAACTCTGAGTTCCATACAACCTCCAGTGGGATCAGCACAGC CACCAACTCTGAGTTCAGCACAGCGTCCAGTGGGATCAGCATAGCCACCAACTCTGAGTCC AGCACAACCTCCAGTGGGGCCAGCACAGCCACCCAACTCTGAGTCCAGCACACCCTCCAGTG GGGCCAGCACACTCTGACTCCAGCACAACCTCCAGTGGGGCTAGCACAGCCAC CAACTCTGACTCCAGCACAACCTGCAGTGAGGCCAGCACACCCAACTCTGAGTCCAGC ACGACCTCCAGTGGGGCCGGCACAGCCACCCAACTCTGAGTCCAGCACAGTGTCCAGTGGG ATCAGCACAGTCACCAATTCTGAGTCCAGCACCCCTCCAGTGGGGCCAACACACCCCA **ACTCTGAGTCCAGTACGACCTCCAGTGGGGCCAACACACCCCAACTCTGACTCCAGCAC AACCTCCAGTGGGCCAGCACACCCAACTCTGAGTCCAGCACGACCTCCAGTGGGGC** CAGCACAGCCACCAACTCTGAGTCCAGCACAACCTCCAGTGGGGCCAGCACAGCCACCAAC TCTGGGTCCAGCACGACCTCCAGTGGGACCAGCACACCCAACTCTGAGTCCAGCACAG TGTCCAGTGGGCCAGCACACCACCTCTGAGTCCAGCACGACCTCCAGTGGGGCCA GCACAGCCACCAACTCTGAGTCCAGCACAGTGTCCAGTGGGGCCAGCACTGCCACCAATTC TGAGTCCAGCACACCTCCAGTGGGGCCAACACACCCCAACTCTGGGTCCAGTGTGACC TCTGCAGGCTCTGGAACAGCAGCTCTGACTGGAATGCACACAACTTCCCATAGTGCATCTAC TGCAGTGAGTGAGGCGAAGCCTGGTGGGTCCCTGGTGCCGTGGGAAATCTTCCTCATCACC CTGGTCTCN

GTCCGGTTGAATAGATTAGTTTTTCTCAGTAACTTACTATCCAGCAGACTGGCTTTCC

TGAGACTTGAGGTTGTGGCTTATACTGGAATGAGACCACTGTACGTGTAGGTGGTTCAGATC CTGCGTAATGGCAGCATGAGGACTTAAAAGGTGGTTTTCATTTTGAAGATGGCTATGTAGCT TGTAAGGTGTATCACAGCAGTACCTCTCATGGCTTTTTGGTTCCAGCAGTGAGGGCATTGGT GAGATCAATGGTAAACTGTGCAAGCTTTCTTTTTATCATTAGGAAATGTGAAACGTTGGACAA ATTTTGAGTTTTAACAAGGACAAAAAGTTGAAAGAAAAGGCACAGTTAACAAAAAAGGGTGG CTAGATTTATCTTGGGTGATGGAGGAAATGAGAGGGAATGCTCTTGAAAGGTGGTCTGTGG ATCTGTCTGAATAGAAAGAGCACAGTAAGTATGCATTGCCGGAGAAAACGTCCTTGAAGCTG TCCCTAAAAACTAACTGGGCCCATGTAGATGGGGCTGCAACCAGAGCTGAATAACATGTTAG GCTCACACATGCATCAGCACTGCACACTGGAATCATTGCTCTTCCTGGACTTTGTAGAAATC AGTCTCAAGTGCTTCAAGAGTCTGGCTCCTGCTACTTTTATCTGTCAGGTAGCACATAAGGTT TGCAGGGTTTATATTTTGTATAGAATCACAGTTGTGGAGAAAAAGTAATAATTTCTCAATGAAT TITAAAAATGGGCCTATTTTCTATCCCCGTGGTTCATCTGATATAATTAGTGTTCCCTGTGAAT TCCCCCCTCTATGGGAAGGATGCCTTTACTCTTTATCAGTAATAAATTATGACTGTTTTCATA TTGCCTTAGGGTTATTTCCCTGTGTAAACCATTGTCTTTTGTTTTGGTTTTCTTTAGCATTATG AAGCTTTGGTATTGTACAAGGTCAGTAGTAAGATGCTCACTAGTCTCAGGGCTTGTGTAATAT TCTGGGAGGTCATTTAAATGCCAGAAATGGTCAAGCAATTATACACAGTATTTATGACTCTGT TCATTTAAATAATITCTAAAAGGGTCTTTTCAAGCTCTAACAAAGTCACTAACAAATGCATTAT TTTCTACAGAATTAGATGTTAGTAGTACAGTACTGCATATTCAGGGAAAAAGTGTGAGGAATT TACAGTTTAGCATATATAAACAAACATGATAGGATTCCTTAAGATGTTACCACCCAGGGGGCC ACAAGCCAGCCTGCTGTCTCAGGAAGCTGTAGAAGGAGTGTTTGTCAATTTCTTGTCACTGG TTTGCTGACTTACTGAGGATTAATTGTTGCCTTACAATGTTACTGAAATAAACTGTTTAATATA AAAAAAAAAAAAAAGTCGACGCGGCCGAATTTAGTAGTAGTAGCGGCCGCTCTAGAGG ATCCAAGCTTACGTACGCGTGCATGCGACGTCATAGCTCTTCTATAGTGTCACCTAAANNNN Ν >826

## Table 4

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NNNNCGCGGCCGCGTCGACACGGCTGCGAGAAGACGACAGAAGGGGGAACGCTC GGCGCTGCCGGGTGAAATCGTAGGACAGTGAAGATGCTGCTGGAATTGTCCGAGGAGCATA AGGAACACCTGGCCTTCCTGCCTCAAGTGGACAGCGCGGTGGTCGCCGAGTTTGGGCGGA TTGCTGTGGAATTCCTGAGACGCGGCGCAAACCCAAAAATCTACGAAGGCGCCGCCAGAAA **ACTCAATGTGAGTAGTGACACTGTCCAGCATGGTGTGGAAGGATTAACGTATCTCCTCACTG** AGAGCTCAAAGCTCATGATTTCTGAACTGGATTTCCAAGACTCTGTTTTTGTTCTGGGATTCT CTGAAGAATTAAACAAATTGTTGCTTCAGCTTTATCTGGACAACAGAAAAGAGATCAGAACGA TTCTGAGTGAATTGGCACCAAGCCTTCCCAGTTATCATAACCTTGAATGGCGACTAGATGTA CAGCTTGCAAGTAGAAGTCTCAGGCAACAGATTAAACCAGCAGTGACTATAAAGCTACACCT TGGTTCAACAACTGGAACAAGCATTGGAAGAGATGAAGACAAACCACTGTAGGAGAGTTGTT CGCAACATCAAGTAGTACCAGTTTTAAGGTTTTAATTCATTTGAATCACTTATGAATTGATGAT ATACAGCAATTACTTTTCAAAATTAATTTTTTATTAATTCATGATGATAAATACATAGTATTCCT CAGTATCTATTCCAAGATACTGAGGTCATAATCAGAAGCTAAGCTGGGTGCAGTGGCTCATG CCAGTTATCCCAGCACTTTGGGAGGCCGAGGTGGGCAAATCATGAGGTCAGGAGATTGAGA CCTTCCTGGCTAACATGGTGAAACCCCATCTCTACTAAAAAATATAAAAAATTAGCCAGGTGTG **GTGGCACGCATCTATCAGAGTCCCAGCTACTCAGGAGGCTGAGGCAGGAGAATCGCTTGAA** CCTGGGAGGTGGAGGTGAGCTGAGATTGTGCCACTGCACTCCAGCCTGGGTGAC AATCAGAAGCTAAAGTAAAGTTCCTTTCCTGGTGCTAACTGTGGTCTTCTTGACACATTAAGA TGTATTTTGTATTTTAAGAGTCTCATGCTCTACCGTTGGAACTAGCCAGATGGCCATTATTTT GTATTTTAAATACATAAATAGGATTGAATCAACTAGAAATGAATCTATATGTTCTGTATATATG AATGACTATCTTGTTTTTGCTACTTCTTTTGACTGCTTAATTTTATTATTTTCATCTTTATTGATC AAATTTGAAAATAAAATTCACAATGTAATACTACTACTATGCAGAATTTTCTAAACAGTTCAGT ATTTTTGACTTTTAAAAACACCCCACAGTGTTAATAGCCACAGAATATTGAACATCAATAGGAT TTTTAATGCTATATTGTTATAGGCAGTTTATTCATTTTTCTTTGTATATGAAGATGATAAGTATC ATATTGCCTAAGTTTGAGTGATCATGGTTAATTAATTGGCTTAAATAGTACTCAAATTTGTGTG GTCGTATATTGTATTTTATCAAGGACTAATTCTTCCACCATACCCAAAGCATCTAGGAGACAC TCTGTCATTTACATTTACAAATAATGGATGCAGAGAAATATAATCAATTCTTGATTGTCCTGGA TTACATTATAGGCAACTATCCCTTCTCAAAACATAACTTGATTTATGTTTTGTTTTATTTTTAG

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>833-

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CNNNNNN
>836

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PCT/US00/33312 WO 01/42467 842

## Table 4

CCTAACAATGCCTGTCATAAAAACAGGCATTCAGTACGTTTTTGATGATGAACAAATTATACT TATTTCCTTGGTATTTGACAACTACTTGACTGTATATGATGATAATTAGAATATCCACTCTGAG AAATCATTTAAAAGAGAAAACTCATTCAATGCAATCTCAAATGCCTTTACTCATCACGCTCTCA TTTTCTTCCAGATTCCTGGTGCCCCTGATGATGAAGCAGTACGGATATTTTTAGAATTTGAGA GAGTTGAATCAGCAATTAAAGCGGTTGTTGACTTGAATGGGAGGTATTTTGGTGGACGGGTG GTAAAAGCATGTTTCTACAATTTGGACAAATTCAGGGTCTTGGATTTGGCAGAACAAGTTAAG GGCGAATTCGAAGCTTACGTAGAACAAAAACTCATCTCAGAAGAGGATCTGAATAGCGCCGT CGACCATCATCATCATCATTGAGTTTAAACGGTCTCC >837

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>838

>839

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>841

GCTGTTCTAATGCTACTTATTATTATTCCCTTCCTTTGTAGAATGTATCACACTAAAAGTGTTT AATCCTGACTATAACAATTATTTGTTAACTATTAAAGGGGTAATTATACTCTAAGCTTCCAGTT TTCAGTTAAAACAAAAATGATTAATATGCCTATACAGAACTTTCTCCAGCACTTGGTAAGTATT TTTTAAAGTGAAGTCTATTCAGACTGCAACCAGTAAACTATTTATGCTTATAATTTTTCTCACG ATGGATTTCTGTTCCTTTGTTGCATTGTTTGTGTTTATTTTATGTGATCTTTTTTAGCTACAAG **GTGGGAAAATGACAGTGGTTTAGAGATAAGAAGCACATGAATGGAAAGTAAATATGTGGAGA** TTTTTGGCCACTCTTGTAACTACTATCTGAAGTAGTTTTAAATANNNN >842

**ACTAGCTGTTTGGGAAACTGAGGATCATAGCTCACTGCAACCTCCACCTCACAGGCT** CAAGTGATCCTCCCACCACAGCTTCCAAATAGCTGGGACCACAGGTGCAAGCCACCACACT TATTAATGTAGATTTCCTTTGTAGATGTAGATTTCTTTTACAAAGTGACAGCTTTTCAGAGCTA GTCCTATGTCTGCAGTTTCTCAGAATAACCAGCTCAAAATATGCCAGAGAAGTATATTTTGGG GTGGCATATTCTAGTCTCCCAGTCATATTTTGGGGTGGTGTGTCCTGAGCCCCAACAAGA TAGGTTTCATTTTTGAAAATTGCTCTTCCAGTCCCACTGTTCATCTCATAAGCCCAGGAATCA CCACCTGTTGATTTCCTAGGCATCTTCTTGCTCAGGGTAGTAGATGTTTGGTGGACTAGAAA TGCAGGGAGAAAAAGGAAGGCTTGGTGATGTCAAGGATTTTTAAAAGCAAACTATCTCAC TGTGTTCTCTCAATAGTCACCCTCTGTGCTGCTCATTCCATGAGGCTTAAAGCTGATAACTGG **GCTGTGCTTGGGGAAAATATAACTGTGGATTAATTCTGACTCATTGTTTTGGAANNN** >843.

ACTITITITITITITITITICCTATTAATTGATTAGGAAAAATAGGTAGACCCTGAG TGAAAGTAGAAAAGAACCATTCTGGTAAAAATTCTGAAAGTAGAAAAGAACCTTTAGCTTTAA 

# Table 4

GAAAAGAATATGAAGGAGAAGGGACCAAGAAGGCAGATACATTGCCCCTGATAAAGAAGTC ATTTTTCTCTCACCTTTACATAAATATCAGCCACTAAAAATCTAGGAGCACAAATAATGAAAGC GAACCCTGTTCGCTCTGNNNNNNNN >844

ACCAGGAAATTGGTTTGATTGCCATAGGCTAACCTTGGACCAATCACTGTGGCCAAA TACATGAGGATCCTTATTGGCTCCTTCTACTAGCAACAGATGGTTTAGAGAACAGTGTATCAC AGAGAAATGGGGATCACTATTATAGGCAGATTGAATAAATGTTCACTCTACTACTCAATA AATATTTGTTGAACAAATCAAAGCTGATCCCTTTTTTCAAAATTTTTAATGTGACTCTTAGGGG ATGGTGGATCCAGGAGAGAGATTAGTGCCACACTGAAAAGAGAATTTGGTGAGGAAGCTC TCAACTCCTTACAGAAAACCAGTGCTGAGAAGAGAGAAATAGAGGAAAAAGTTGCACAAACTC TTCAACCAAGACCACCTAGTGATATATAAGGGATATGTTGATGATCCTCGAAACACTGATAAT GCCTGGATGGAAACAGAAGCTGGGAACTACCATGACGAAACAGGTGAGATAATGGATAATC TTATGCTAGAAGCTGGAGATGCACACTGGAGCGAGGACTCTGAAGCTGACTGCCATGCGTT GTAGCTGATGGTCTCCGTGTAAGCCAAAGGCCCACAGAGGAGCATATACTGAAAAGAAGGC AGTATCACAGAATTTATACTATAAAAAGGGCAGGGTAGGCCACTTGGCCTATTTACTTTCAAA ACAATTTGCATTTAGAGTGTTTCGCATCAGAATAACATGAGTAAGATGAACTGGAACACAAAA GGCTTAAATTAAACTAACCAACTAATGCTCTTTGAAGAATCATAATCAGAATAAAGATAAATT CCCCAATTCCCCTTAGGGGGGGTTTTTTCCCCCCCCCGGGGCCGGNNNNN >846

>847

>848

**GGATGTTTTCTTCAGCTGTATGATTCTATCATACTTGAAACTGATGAAAAATTTAGTAT** CCTATGTCTTTTTATAGATCTTATGATTTATCAAGGGGATTTATATGTCTTATTCTCCATATAA GTCTAAAAAATCACATTGAAATTCTTAGTGATAGGTTGACTACACATCATTTGTTGCCAAAGT CATTACCTCAAGCTTTGTAAATTCTTCTAGATAAAAGGAGACTTGTGATTAGAGAACTGAATTT CAGCCATTTAAACCTGTAGACATAGAAAACAACCCAGTGGTCAAACCTGAGCTTCAAGAGGA AGCCCAAGTCCTCTGTTTCCTGAATGGCTTTTCCACTCCAATTCATCACATATCTGCTAAGA AAGAAAGAAGTAGCCTTCGTTGCAGCCAACATCCAACAATAAGTCCCACCCTTAATGACAT TTAAATAGGTTGTTTAACTCGGTGGTATTGAGACTGTAACCTTAATGGCTCAGGTCTTTTAGC TTTGTTCTTTGTCATAATCTGCACTCCTGGCCAGACTGACCAAACCTGGGCTGCAAAGGAAA GAGATTTGAATTGATCACCAATGTATGAAAAATACAGAACCCATGTCTGGCTCCTAAACTCCT **GGTAATAATTCCCGCCATCGTAGCAAGTGTCCCATGCATTCAGATAAAGCAGTCATAATTTAT** GGTGTATTTTACCGAATTGGTCCAGCATATTGGTCCTACAAGGCTCAGCCAAGAAATGTATC TGGTGCCTTAAACTACAGATTTCTGGTGACTCTTAAAACTGGTTTACAAAGATTGAGAAAACA **ATTAGATTGAAGAGTTTTGCTTCAAGTAGACCTGCATTCATAGCTAGAGTGCATGAGATTTTC** AGCACTGTAGAATTTCACACAGGCACAAGCATAACACCAGTACTTTAGCAGCCGCCAACAGT TGCATCTATTAAACGTTTTGAGAAATGACATTGACTTATGCACATTTAAGCAATCAACAATGTT TTAGAAGTCCAGGTAACATATAAAATATTCAGACCTAGTTTTACTTTCCATATTGTTGCTCC

## Table 4

NNNACATTATCCACATTTAACACCTTTTCAGTTGATGGCTGATTATCTGATTTTGCAA ATGGTGCCTCACTGTGGGGATCCCCTCCTCTATTCTCAGATGTGGTGATGGTCCCCTCGTTT TTCGACGTGCCTCCCGCTGTGGGCTGCAGTGTCATATGAATCTCGGAAGCACATTTCAGAA GTCTTTCTATCTTTTGTTCATAATCTTTGAGTAGTCTCTTCACTTCTTGTTGACTCTTCTGTGA AGGCAGCTCTTCACACAGCTCCCTCAGGACTTCCATGTGGTGATTAAGCTGGTACAGGCAG AAGTTTCTTTCTTTATTTATTTGCTTTTCAAGTTTTAAAATATTGTCACTAAGCTTTCCTTTTTC AATATCTATTTTTAGTTGTTGAACATATAAAGACAGTTCATGATGAAGAGACTCCCATTTGGCA CAGACATCTCTACTCTTTTCTTCTAAAGACATCTTTATGTCCTCAGTTACATTATTTTTTAGTTC TTCAACAGCTTTCAAATACTTGGCCAGACTTTTTGTATTAGAAATTATTAGTGCTTCCTTGTGT TTTGAAATGAGTTCACCGGGGCTCTCTCTTTGCCCCAGTAACTGCTGAGCCCTCATCATATA TGATTCAAGTTCCTTCTGGGATTCTTCCATCTTCAGCCTGATGTCCAAATCTGGTGAAACGTC AGTTAAGTTCTTCAACGCTGCAATGAGTTTTACCACATTGATCTGGACTTTCTCTTTAGCTTCT TGAATCTTTGCCTGAAGCCCAGTTGTGAGAACATGTTGAAAGGACTCCTGGCTTGAAATATTT TGTATATCCATTTGTAACATATCTTCACTTCTTGCCATAAGCTTTCATCAAACATAGAGCCCTT TGGCAATAAGATGCTTCAAAGATTCTTCCATTGAGGTGTCCACATCATCTTGATCCAAAACAG **ATTTGGCTTCTGCCTCCAGATTTCCACTTGTCCAATGAGTTTTTCAACATCTTTAGCCACTTT** TAGTTGCCCTGTGAATTCTTCATTTTCTTTTTCATGTTTCTCCCAGCCTTTATATTTTGATTAT **AATTTTCAGGAAGTTCTACTGACATATCTGTTGAAAACTCAACAGTTGCTTTCTCTTTTAGA** TAGAATATTTCCAGAATTGTCAAAAGTGGGCTGATCCTGTTTTTTATCATCAGTGGCAGGTT CATTTCAAGTTGAGTTTTTGAAACCAACTTTCTCCATCTTTTATTCAGCCTTCTCAGTTCTTTA GAAATAGATGATCCAACCACATCATTGCTGACTTCGACTAAGAAATTTCCTGCTTCATTTAAA TTTGTCTCCTCAAAGCAAGCCCTTAGTAAGCGAAGGTTTTCCACATAAGTAGCCCAACATGC TTCACCATCATATACTGTTTATTAATATTCTGACATTCTCCAGCCAAATTCTTATAAATTTCTCC ACATTTTTGAAAAGAAGTATCAAGTCGAGCTAGGAATTCTTTTTCTTCAATAAATTTATGCCAG TCTTCCAGCAATAATTCCACAGATTCTCTGCTCCCATATTTAATGTTCCAAATATCCAATTTTG ATTTCACTTCATCTACCAAACCAAGAACTAAGCACTTGTAGTAATGAAATTCTAGAAGTAGAA TAAATTTTTTCTCCAAAATGTTGTTGATTCGTCTTTTCATTTCCTCCAATTTGTTAGGTGGTAC CAATGGCAAGTGATTTTCATCCTTATTTTCAAAGGTAAGGAGAATGTTCGAATGATGCTCAAA TCTATCCATCAGGCTCTTGAATAAAGTCATTTTCTCTTGTATCAGAGTCACGGCTTGAGAGTG ATCCTGGGAGGCTGACAAATCTTCATCCATAAGCTCTTCTACCTCCTGGAGCCAAGCTTCAG TTTGATGGAGGGGTGGGGCAAGGCATAATTTAGCTTTATTTTCCATGCATTAATCTGGTGA TCGAGGCCATCCCAGGCTTCTCTCAACTGTAAATGATCCTTGTCCAGCTCATCCAGATCCCG TTTTATTGACAGGACATCCAAAAAGGACTTTTTTTCTTCATTGAATGACTCCATAAAGGACAG CAGGCTATTATACTTTTTAAAGTAGGTATCATTCTCTGAATCCTTTAGCAACTTCTGTAGTTTT

# Table 4

TCCTTTTGCAGAGTTAACCAGCCCATAGCATCTTTCACCTTTCCCTGAGCCTCCTCCAGTC CCAGGGGCATCTTTGGAATACTGCAGAAACTGTGCCACATAGGTCATGATGGACTTTTCATC AGGATCAACACCATCTTCTGGTTCCAGCAATCTGGGGATTTTTAATTCTTGTTCTGC AATTCTGAAGGCCTCTCTCAGATTGTCTTTGTTGGATCTATGCTTCACACTCTTCATGTCAATT AGGTCTGGTCGCAAGGCATGAATGATGGCCAAAAAAGCCATCCCATTTCTCCAACTTGACTT AAAATCGGTCACATTGACAGACTCATAGGTGGCGCATTGTTCCTGAGCCCACAAAAGAAGA GCCTTTCTTGCAGACATTTGCCATCTTGCTTGCACTTTAGAGCATTTCTTAGCTGGAGGACTT GAGGCAGGAGATGAGTCAACCACACTCACATCATCCAGGGAAGGCTGATTGTAATTGCAAG AAAGAGTCTGGGCAAGCTTCTCAATATGAAAGTGCAGGATAATTGTCCAAATTAGGCCAAGG TTCTTAGGAATGTCAAGGCATGTTCTATATTGATTCTACACTGGAAGGTATTAGATCCTTTATC CCGAGGCAACTGTTGCCCAGAAAGTACTTCTAGCAGATCCAGGAGGACATGCCCCTTTTTAA TGTCTGTGAATAGGTCGGATATAACTGAGGGAGAAGTGTGCCTGGCCAACTGTGAGTTTATC CAGCACGTGAAGGCTTTCTTCTGGGTGTCTTCCTGTTCAGCTTGCAATGAAATATGGAGATC GTCGATGCCCCAGGAACCCTGTTCATCTTCGGTGGGAAGCTCAGGACTAGATGCCATTCTTT GACTCAATGGAGATTATATCATGTCCATCTCAGTTGAAGAAGTGAACGTCCGCCCGGCCGAG GGGCAAGGGCGCGGGCCGGGCCCCGAGGTCGGCCCCGCTTGCCTGGCTCTCGG ATCGCGCCTTTTGCTCGCTCTCCCTCTCGCTTTTTCAGGTCCGGCCGAAGGCTCTGGGCGC **AGCTGAGCTCGTGCC** 

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GAAGAN
>853

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TATTTCCCATTAGTCATTAAATGAGATAAATGACAAGCTATTGCTGCTTCTCCATTCTGTTTTC
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>854

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>855 >856

# \* 846 Table 4

AGTGTATATAAGAATGGCTAAGTGACCATTAGTCATGTGAAAAGCTTAACAACTATTAAGCTC
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GTTAGTAAAGGAAGACATAAGATATGCTTACTTAAAATCCTTGCTGGTTCCATGCCTGGCCATA
CATTCCATATGCAGGAACTTACCCACCANN
>857

NNNNAGTCGACCACGCGTCCGGTTTTGTAGCAAAGTTTTCCACACAGGTCTTATACA TGTCCTGTAAAAGGTATTCCTGGATTTATATTTTTTAGATTGCTATTGGTTTCCCATCTTAGT TAACTAATTGATTATTGTTGGAATATAAACATATTTGAATCTTTTGTTGTTACATACCCTTTATT GATGATAATTCTGCTATTTCTTTCTCTTAACTGAGAATTCCTCCAATTTAAAACAAAGCCTTTC AATGAATCCCTCAGCAAATGGAGACTGAGCAAACACATATAAGCTACAGCCAATAGGTCAGG AGCCAGGTGGTAGAATAGACTCTTTTTTCAAAAGATGGCTCTGGCGTCTCCTTTAATAGTAGA CATCCATTTTTCTGGAGTGGTACATATGCAGCTCTTGCTAGAATTAGGTGCCTGGTCTAGAG GAAGACTCTGCAGCCCAATCTAAGCTGTTATTTCCATTTGGTCAAACAGTATTTCAGTGGCAT CTGGTCTGGCATGAGAAATCAATTCAGTCAGGTCTCTTCTGGAAGAATATTCTAATTGATTAC AGGTCCCTATAGTTGTTCCTTTTGGGTTTTGATTTTTCAAATGACCAAGTCCCTTATATGGGA AGGGGCTGGGCCTGACTTTTGCACTGGGCCTGAGTTGTGGTATGCATTGCATCACTCTTAT TGTTTCTGAACTTTCTTGACCACATTCAGATTTCACTCTGGGATGTTGTAACAAGTCCATGTTT GTTGCAACATGGGGTAAGGTTATTACGAAGGAGACACAGCGATCAGTGTATAAATCCAAT CTATATTGATGGTCTGGAGAAGAACTCACATTTGTACCACAAGAATCATCTTCCTTGTACTAT AACCCTTGAGTAGATGACACCTGCCTTTGGCAAGACTTGGAGGAGAGACACATGCTGGTCA TTTGACCAATTTCCAGTCTCCTACCTGGGGACCCTGGGGCTATTCCCTTACTTTTTGTCATAGG AAATTAGGCTCTGAAAAGGAGATATTAATGTGGTGTACTTATGTATTTCATACTTTAATAATGA AGTGACCTTATCTCTCCAAAATGTAGCCACTGTTAACTGCTATTTATGTATTATTCACTGAGTA TATTACTATCTTTGTATTTTCTACAAAGATTTATCAGCACAATTGTGAGAAATCTTCAAAACCTT TTAGGGTTCCAATTAAGTTGGTAATAATGATGCACTTGGCAATTGTTTATAAAGGGATCATTTT AGAAAAAGGAGGAAAGTATTTTTTCCCTCTTCAAAGTGTGACTTGTAGTCTTCACCTGGATTT TTTTTTTTCTGTTTAACCCAGTAGGGCTTTGTTCTCAATGCAGAATCTCCTGTGACCCTTGA CATTITAAGGGATTAATTITACAAGTCCCATTAATAAAACTTGTTCCTTCTTACTCTATACTAAA TACCTTCTTTTCCTTATTATACAGCTCATACATACCCATATCTAAAATTATTTTTGTTCAAACTC CAATTATCTTATAGGATTTAAGATGCTATTTAATTGGGTAAGTCTGGCCCACACCAAGATAGG TGATAAAATGGTGAAACCTCAGAGTTAAACAGGCTACCCTGTTGAGGGTGATCTATTTGGAA TGAGGGTGAGGGAAAAGAAAGAATATGTTTGGTAAGAGCAAAGGAGCCCATTCTATAACT TTAGGTGAGAGCTGATATCTATCAGGGTTTGAATATAGCTCCTACAAATCATTCTGCAATAAT TCATCTACACGTTTGAGCACTCCAACTAAATTTTAATTACCTCAAAGGTAGGGACTTGATCTT ACTCAATATTGTATCCCAAGACTTGCTGGGGGCACTGGCTCACAACTGTAATCCCAGCACTT TAGGAGGCCGAGGTGGGAGGATCAGTTGAGCCCAGGAATTCAAGACCAGCCTGGGCAACA TAGTGAGACCCATCTGTACCAAAAAAAAAAAAAAAAANNN >859

CTGTAGTCCCAACAATTCGAGGTGGGAGGATTGCCTGAGCCTGGGAGGTCGAGATTGCAGT GAGCCGAGATCGTGCCACTGT >860

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GTAAAGATAATGACTATCTTCAGGCTGATAAATTAACAATGTATGCTGCCATTN
>861

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NAGTCCCCATTATCAAGATTTAAAAGAACACTAATTAATTTTCACACTGCATATCTCAT
TCCAACTTCTCTGAGGGTTACAACTGATTGCAAAAAGTACTCCATGCTCTCAAATGTAAGGAT

>865

## Table 4

TCATTTATGAGAGAGTGAACATACTGCTTGTAGCTAAAACATTACAGGAGACCTTAAAAAGGG GTATAATTGGTCCCTATGTGAAATGAACCTGACATATTTTTATAAATTATTTGTGCATGACTAT CTTTTGTTGATAGCACTAGGAAGACTTCTAACGTTAAATACTTTATTTGCCCTCAATTACTAT TTAAAAGTCCTATAATTTTAAGTAATTTTACAGCTGACAAAGATAAATATTTTTTTCTTTTAGTT TTTCTAATGTCTTGGAGGTAAAGTGGAAATGGCCTGTTTTGACACATAATTTCTAGAACTTGG AGTTAATTTGATCAGTTACAATTGGGGTTTTTTTTCAGTTTCAAGTTTTGTGGTGGATACCTTT TCCTGCNNN

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AAAAAATAATTAAGCN
>868

CCCTTGGCCGCCCGGGCAGGTACTAATATTCTTCAACAGAATGCAATAAAATACGAG

## Table 4

GTGGAACAAGGACTITGCACAGCACCTTCCAGCCCAACATTTCCCAGGTAAAGGG CCTTCCCTCCCTTGAAGACCATTATCCCTGCCCCAAATGCAATGGCAGTAGTTGACATTTTTG CGCCTTTTATCTTCTTTGAATACTTTGAGATGCACAGAAATAGAAATGAGACTCAAAATAAGC

## Table 4

>878

# Table 4

>884

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>888

>889

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>898

>899

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. >901

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# Table 4

CAGCAGTCACAATTTTGTGTTGCGTAATATTTCAGGAACTTGCAACCCTGATAACTTGTGCCT GCCTGTCTGTAGGCCTTTAATGATGTTTTATTGAATTTTGGN >902

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GCCTGTCTGTAGGCCTTTAATGATGTTTTATTGAATTTTGGN
>909

>910

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>916

## Table 4

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AAAATGCTT
>921

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>923

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NNNNNNNNNNNNNNNNNNNNNNNNNNGGAATAATTAAATAAGAGTAAACATTTTAAA ACATATAAAAATAACTTTAAAAATATAGTAACACTTTACAAAAATATGTATCTAATTAAAAAATACAT ACATCTATTCTTTGAATAAAGCTTAAAATTTGTTTATAATTTTCAAACTAAGAAAAAGAAGTAGT GAATAATAGCTCCATCCAATTTATAATTGTCTTAAAGAGAATGATTATGTATCATTTCTTGCTT GTCTTTTCTAATACCCAGTCAATCACCTGTACAGCATTGTTGTTTGCTGTTTTCTTCATTTCTT CAAATAGACCCCTTGAAGTTTTAAGATCCTTTAGATAGAACTTAGAGATTTCAAAGAGACGCT. GGCTGCATGCAGTGAAACATTCATGAGTCTCGGTAATACTGTGTTTCTTCAGGGTTTCAGTA ACTACTTCTTTCAGTATCCGTGTGTTTCTGTGATCTTGATTCCTTAATTTGCCTTGATGTTT TTGATTCATGCATACTTTTTTGACCTGAACTGGTCTTTGTAGCAAGTTTTGGAGTTTCACAGC TAGGAATTGGAACCAATGGACAAGTCACTGGTAAGGACCGCTCTGTTTGTGGCTTTCTGGAT GTCACATGATGATGATGATTACTATTACCAGTTGTCTGAGAAGAAGAAGAAGACTCTGAACTT TCAGATTTCACAAGTCTTTTTCTGGGATAAAGGCAATTCAGATCTTTAGATCTCCGTTTCAATC GGGATACTTCAGTTCGAAGTTCATTTTGTAAAACTTCTCCGTCAGGGACACTTCCAGGATCT GACGAAACTACAGGAGATGGAAGAGGGCTCAACACAGTAGGTACTGGAAAACTTTCTCTGG TGCAGGTAGTTTGAGTTTCATAACGAATAAGACGAGACTGAAGTTCANAAAATCCTCCATCTC TTTCCAAAGCTTTTCGGTCATCCAAGCAATATTCAATTCCATGATAATGACATACTGAGGCTT TCTCAAAAGGTAAGACCTGAAGTTTCCCAGGACTAAGTTCTGGTGTCAAAACAAAAGTCTTTT CCCCTTTTGAATCGGTAAAGGTTGAAGATCTCCAANNNNN >926

#### Table 4

GTGCTATAATTTCTTTTATTGAGAAATGGAAGCATCGTTGCTGGGTATGAAGTTGTTGGCTCC AGCAGTGCATCTGAACTGCTGTCAGCCATTGAACATGTTGCCGAGAAGGCTAAGACAGCCC TTCACAAGCTGTTTCCATTAGAAGACGGCTCTTTCAGAGTGTTCGGAAAAGCCCAGTGTAAT GACATTGTCTTTGGATTTGGGTCCAAGGATGATGAATATACCCTGCCCTGCAGCAGTGGCTA CAGGGGAAACATCACAGCCAAGTGTGAGTCCTCTGGGTGGCAGGTCATCAGGGAGACTTGT GTGCTCTCTGCTTGAAGAACTGAACAAGAATTTCAGTATGATTGTAGGCAATGCCACTGA GGCAGCTGTGTCATCCTTCGTGCAAAATCTTTCTGTCATCATTCGGCAAAACCCCATCACCA CAGTGGGAATCTGGCTTCGGTGGTGTCGATTCTGAGCAATATTTCATCTCTGTCACTGGCCA GCCATTTCAGGGTGTCCAATTCAACAATGGAGGATGTCATCAGTATAGCTGACAATATCCTTA **ATTCAGCCTCAGTAACCAACTGGACAGTCTTACTGCGGGAAGAAAGTATGCCAGCTCACG** GTTACTAGAGACATTAGAAAACATCAGCACTCTGGTGCCTCCGACAGCTCTTCCTCTGAATTT TTCTCGGAAATTCATTGACTGGAAAGGGATTCCAGTGAACAAAAGCCAACTCAAAAGGGGTT ACAGCTATCAGATTAAAATGTGTCCCCAAAATACATCTATTCCCATCAGAGGCCGTGTGTTAA TTGGGTCAGACCAATTCCAGAGATCCCTTCCAGAAACTATTATCAGCATGGCCTCGTTGACT CTGGGGAACATTCTACCCGTTTCCAAAAATGGAAATGCTCAGGTCAATGGACCTGTGATATC CACGGTTATTCAAAACTATTCCATAAATGAAGTTTTCCTATTTTTTTCCAAGATAGAGTCAAAC CTGAGCCAGCCTCATTGTGTTTTTGGGATTTCAGTCATTTGCAGTGGAACGATGCAGGCTG CCACCTAGTGAATGAAACTCAAGACATCGTGACGTGCCAATGTACTCACTTGACCTCCTTCT CCATATTGATGTCACCTTTTGTCCCCTCTACAATCTTCCCCGTTGTAAAATGGATCACCTATG TGGGACTGGGTATCTCCATTGGAAGTCTCATTTTATGCCTGATCATCGAGGCTTTGTTTTTGGA AGCAGATTAAAAAAAGCCAAACCTCTCACACACGTCGTATTTGCATGGTGAACATAGCCCTG TCCCTCTTGATTGTGATGTCTGGTCTATGTGGTGCCACAGTGGACACCACGGTGAACCTTCT GGGAGTCTGCACAGCTGCTGTTCTTTACACACTTCTTCTACTCTCTTGGTCTTCTGGATG GTCTGCTGGGTCCCTGGGGTACGGATCATCTCGGTTCATCCATGGCAGCATTGAGAGGGGG GGGTTGCGGGAGGGGCCCCTTTTTGGTTCCTGTGGTCGCCCTGCACTCAAGAGGGTGGG TGCTGCCGGGACCCCGTTTGCCCCGGCGGGGTCGGGGCGCCACCAGGGCGGGAGGA **GGCCCGGCGCTCCTGCGTGGGAGGTGGAACNNNNNN** >928

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TCTTTAATTGTAACATTTATTAAATAAGAATAAGAGGACATTTTTAAAAGGAATTAAAGGAACAT
TAATTCCTTCATAAATGTATAGTGCTTAAGCTCTGCTTTAAAAGGTCTTTCCATGTGCTCTTGG
GTAACCACTTAGGGCTGAATTCATAGTATAAATATCAATAAATGTTGCAATCACAAT
>930

>931 >932

**WO** 01/42467

Table 4

>933

ACAGTATGTTTCCACTTATGGACAGATAATTACGTAGTAAACATAGAAACACACGAAC TGAAAGGACACACCACTTATGGACACACCATGGGGAGGACAGAAGGAAATAG GATGGAAAGGGGTTGAGGGACTTCAACTGTATTTGTGATGTTTTAGTTCTTTAAAACAAAAAT CTAAATGACATTTGAAATATGAAACAAACGCAGAAAACATCAAAATGTCAACAATACTTAAAC CTGAGTGTTGGGTGCCTGAATGTTATATTGGTCTCTG

ACCCAGTATATGAGCAATTGCTCAGCAGTGTTTGGATATAGGGAGTGGATAGCTATT
ATTAATTGCAGATTATTTTGGAAGGAAAAACACACAGAGAATTATGTATCTTTCAGTGTAAATG
TTAGTTCTAAAAACAATCATATTATTTACAAAGCTGCAGTTATAGAACACAATTCTGATTTCTG
CCTCACCCCCACGGTTAATACTGTAAAACATTTCCTACGTTTCATCTGATAGTGTTATTAAAAA
TAGCTGTTATTTTTAATAGCTATACTAAAACATAAAAAATGTTTAGGCCAGGCGTG

ACTACAGATTAAGTATTAATATGCTGTGAGTGCAGATAGAGAACAGAAACAGGCTGT TTGATTTCACCATGGTCAATGCTCTGATGTGCCAAACACAGGAGGTTGTGGGAACATATAGA CAGTGACCAAACTTTTAATGAATACAGGAAGATTTTCTGGAAAAGATGACATGTAGCAGACA GCTGACAGACGAGTTTACCAGGTTCAGAACTTAAGTGATAAATCTTTTTATCATAAAATTTT AAGTGTGGTAGAGAATAAAAGTTTTGAATTAAATGTTGAATGAAATGTGTTATG >937

GTCGACCCACGCGTCCGAAGAGGTCCTATGACAGGATCAAGGTAAGTATGTAGATA ATTCCAGCATCTAATTTAGTTAAGAGACTTTAAAAAGGGATTATATATTGGAGAAAAAGGCAG **AAATTAAAAGTGTATTTTCAGTCTTAATATCTCACATAAATGACCTTAGAATTGGCTATGTTAG** TAGTTAGTTTATGTGGTACATGTTAAACACCAGTAGAGAAACAACTATGGTTGTGATTAAATC ACTTGACTTTCCTGCCAGAGCTAGAATCTTAACTCCTTTAAAAGACGACTCTGGGAAATCCAG TGTTTGTATGTAAAAATAAAAGGTAAGTTAATTCTAGATTGAGGGGCAGAGGCTATTTCTTAA TCTCCAATCTCCTTGGGAAGGGAAAGTATTAGGAGGCAGTAATGGAGTAGAAAGGTGGGGA TGGCAAATAAGAGAAAGATTTAATGTAACAAAACTGTTTTGTCCCTCTTCTTAAGTAAATAATT ATTGGAATAATTAGTGTAACATCACATAGTAATGTGTATTTTGTCTTGACTAAGTTGTGTAAAG ACTTACAGCATATGITATGAAGCTGGTTTGAAAATTGGTTTTAGATATATCTGCAAGTTTACTA CTTTGACTGTAAAAAAAAAATGAAAAAGTAGTTGACATCTGTCCTCAGAAGAAGTTTGCAGG TTGCATATTTGTGTGTAAATACACAGGCTAAAAGGTAATTTATGTTCCTTGGGAATTGAAATG **GTCAGTGGCCCGTTACAGAAACTTATCAGTCATATATCAGCACCAGTTCATTCTTTTGCACCT** TAGGGACCATCTGTCCCCTGAGGTGACCTGAGAAACAACCAGTTGCCCACAGACTGTTATTT CTTCAAGTGAGCCAGGATTTGATTTCACTGCCTTATATTCTATTTTTAGTGTACAGTGCTTTGA TTTTTTGGAAAAACTTAAATTTTAAACATATTTGAAAAATGTTATAAGACTTGGACATTAAGTCT GAGCAGTCTGCCATCATGTGGATATAAATGGACTATGTAAAGTGACATGGTGCTTACTCTCT ACCTAATAATAGCCTCCTCCTGTTCCAAACAAGATAACCAACAGGTATATTTAATTTACCAG TTAATATGTTTTGGATAATTGGCTGCCTTGAAATGCTATATGTTTTATAGTACATCATAGCTTT **AGTTTTCTTCATAAGGAAATTACAGTTACATCCTAATCGATTATTAAACTATCACTGTGTCTAA** GAATGGTGGAAGAGATAGGGAATAGGTAGGGAAGTCATTATAAATATATTTTCACTGGCCA 

>945

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### Table 4

NNNNCTCTTCTTCCATACTCTTTTAATTGGATATGCCAGTGTGTCTCAGTAATTTCCA
GTGGCTGTAAAACTTTGAGAAATTTTGTAGCTTTTAGAAACCACATACCTGTATTGCCTGATT
GCTTATTAAGTGATCTCTTAGAGGTTTCCAAAGTTATGAGTTTGAGTTTACAAGTGCAGTTTTT
TTCCATGAAAATTTCAGTGGTGACAAATTATAGAATTTATCATTCAATTCAGTCTTAACTAGAA
ATAATTGCATATAATAAAAACAGGTTCTTGACTGTTCTTTTTTGTCAGTGTTTAAGAATAGAGACA
AAATAAAGTTAGATTTGAGTGCCTCAGAAGATATTAGAAAATTAGAGATAAGGTTTATGGCCTT
TAAAAAATTAAAGACAGTATTGGGGGAAAGAAATGAAAATTGGGACCGGGCGTGGTGGCTC
ACTCCTGTAATCCCAGCAGTCTGGGAGGCCAAGGTGGTGAATCACCTGN
>940

ACTGCCACTTCCATTTTGTAAGTGAAGCCCAGAGAAGCAAAGAAATGTGCCCTAGGT CACATAGCTAGTCGGTGGCAGAGCTGTGATTGGCAGGTTGGTCGAATGCCTCCAAAGCCCT CGACCTTCCCACTATACTTCACGCATCTCTAGAGAAGAAGACAGAAGTAGCCAGGATGAAGGT CTTCAGGTTTAAGAAGAACTATGAAAAAGCAAAAGATTTTTGTTTTCGTGGTTTTTTTACTATA AAGGAAAACTTTAAATAATAGCAAGAGTGCTATAGGTAAGATATCAGAA >941

ACTTCAGGAGATACATTCTGCTAGTTTGGGGTGGTGTTCTATAAATGTCAATTTAA
TCCAGTCGGCTTATGATTTTCAGTTCTATATTCTTACTGATTAATGTGTATATACTAGTTCTGT
TACTAAGGAGGGATGTTAAATTAATCCCTAGCTGTAATTGTGCATTAGTTTGTCTCTTTTCAG
CTGTTCTAGCTCCATAAATTTTTGGAGCTGTTAGGTGCATATACGTTTAGGATTATTTTGTCTT
CTTGGTGAACTAGACCTTTTATCATTAGGAAACTGTCCATATAACCA
>944

AAAGTAGAGACCTTGATAAAGTCAAACTCCTTGCCTTTACAAGTGTGTTCTAGCAGCCATG CAAGGGAGATGCCCATCTGGCAGTGGCCCAGGGCAAGGTGTCAGAGCCCTAGTGGCAGGG AGATGGCATCCACATATGAGGGAGGGTGACATGGTGCTAACTGGGCATCTACATAGGGCAG GGGACAGTGGTGATGTGAAATTGATTACATCAGGGTNGACGGAGTACCTGCCCGGGCGG CCGGCCACCGCGGTGGA

NNNNCCCCCCCTCGGAAGTCTTCTAGNATTAATTAACGCGGGATCCTGAAGTTGA ACCCATGTGGTCGAATCCCAGGACACGTTGAATTACAAGCTCCAAGTTTTTCCGCTGCAGCG TATCCAAGTGTGCTTGGAAAGAAGAACAAAATTAAACATGCTATTTAGAGCTTTCAGGGCTAA CTAGATTTTGATGTTGTCATTGTAGCAAATAGTTCTAGAGTGTGGAAGAAGTTGAAAATGTTT TTATGATACAGAGATTTTTATTGTACTGCATATTTAATGAATTATTTTATAAATTGCTGTTGTGA AGCATTTGTGAATGACCTGCCTCCTAGCTTTCAATGCTATTGCCCAGGCTGACTTTTATTGCA ACTGTTTTATGATACAGTTTTGCATTGTATGTGTTTACTTTTTAAAGAAGCATTTCCTGGGAGG TTTCTTTTTCTGGTTATGAAAATAATATATGCTTATGGGGAAAAATTGGAAAATAGAAACAAGT ATCTAGAAGAAAATCACTCATAATTCCAGCACCCTGTTAATACTTTGTCTTTTCTTACAGTTT CTAATATGTGCATGCATAGTATCAATGTGGTTTTACAAAGAGTGTGCAAATTATGATTCTCT TTTTACATCATTCATGCCATTCTGCATTTTCCACTTAATACTATACTATTGGTACTTTACCAAT CCCTTAAGTATTCTCCTACATAGCATTTAAAGGTGAAATCTACCACCTCCTATTTTTAATATTT ATGTTGTTTTGACTTTTCAGTATAATAAATCATGTTTATATGTAAAGGTTTTTATCTCCGGTTAT TACTGTAGAATAGATTTCTGGGAAGTATAAGAACAGGAGACATAAATATTTTTAGGTCATTGA TACATAATTTGAAAATGACTCCTAGAAAGATTTTAACAATTTGTGTTCTACCAACGGTGTTTGA GGGTGTCTTTTCTCATTGTCTCACCAGTAAATGACAATTGTAATTTGTTTATTTGCAAGGCAA AAAAAAAAAAAATTGCAATTTGATATTTAAAGAGATTAAACTTTTTCTCAGATTTTTATTTGGT **AATTTGTATTTCTTTTTAGTGAAGCTCTTGCTTTTACCCTGGCTACTACCTATGATTGTTTAT GTCCTGGAGGAGGGGAACTTGGCTGAGGGGGACNNNNN** >947

NNNNNCCCCCCCTCGGAAGTCTTCTAGNATTAATTAACGCGGGATCCTGAAGTTGA ACCCATGTGGTCGAATCCCAGGACACGTTGAATTACAAGCTCCAAGTTTTTCCGCTGCAGCG TATCCAAGTGTGCTTGGAAAGAAGAACAAAATTAAACATGCTATTTAGAGCTTTCAGGGCTAA CTAGATTTTGATGTTGTCATTGTAGCAAATAGTTCTAGAGTGTGGAAGAAGTTGAAAATGTTT TTATGATACAGAGATTTTTATTGTACTGCATATTTAATGAATTATTTTATAAATTGCTGTTGTGA AGCATTTGTGAATGACCTGCCTCCTAGCTTTCAATGCTATTGCCAGGCTGACTTTTATTGCA ACTGTTTTATGATACAGTTTTGCATTGTATGTGTTTACTTTTTAAAGAAGCATTTCCTGGGAGG TTTCTTTTTCTGGTTATGAAAATAATATATGCTTATGGGGAAAAATTGGAAAATAGAAACAAGT ATCTAGAAGAAAAATCACTCATAATTCCAGCACCCTGTTAATACTTTGTCTTTTCTTACAGTTT CTAATATGTGCATGCATAGTATATCAATGTGGTTTTACAAAGAGTGTGCAAATTATGATTCTCT TTTTTÁCATCATTCATGCCATTCTGCATTTTCCACTTAATACTATACTATTGGTACTTTACCAAT CCCTTAAGTATTCTCCTACATAGCATTTAAAGGTGAAATCTACCACCTCCTATTTTTAATATTT ATGTTGTTTTGACTTTTCAGTATAAATCATGTTTATATGTAAAGGTTTTTATCTCCGGTTAT TACTGTAGAATAGATTTCTGGGAAGTATAAGAACAGGAGACATAAATATTTTTAGGTCATTGA TACATAATTTGAAAATGACTCCTAGAAAGATTTTAACAATTTGTGTTCTACCAACGGTGTTTGA GGGTGTCTTTTCTCATTGTCTCACCAGTAAATGACAATTGTAATTTGTTATTTGCAAGGCAA AAAAAAAAAAAATTGCAATTTGATATTTAAAGAGATTAAACTTTTTCTCAGATTTTTATTTGGT AATTTGTATTTCTTTTTAGTGAAGCTCTTGCTTTTACCCTGGCTACTACCTATGATTGTGTTAT GTCCTGGAGGAGAGGGAACTTGGCTGAGGGGGACNNNN

#### Table 4

>949

ACTTGGTAGGTTGATCTCTTTCATTCTCATGGTTTAATTACCATCTATTCACTGATTAC
TCCCAAAACTGTATCTATAGTCCAAGACTGTTTCTAAAAGGTCTGCACCCACATATGCAAATA
AATACCAGATATCTCTCTTGGTTATATTGCACATA
>951

ACTCTTAGGAAAGAGTAATGGGGTTGAGGATGGTTAATTTAGCCCATCCTAACTTCT GTGAGATTTTTTCAGAATATTTTGGATGGTTCTCTCACTTTTGTTATTAAGCATTTGGGAAGA AGATTCTGCAGCCTACTCAGGTGAGCCAATCTCATGGCATTGAACAGAGAAGATATGTTTTC ACGTCTCTAACCAGTGTTTTTCATAGTGTAAGTCAGGCCTTTCTCCTTTGATCTAAGTGGAAC CAAGAGGTTAGATACTCCCTTTTCTTTAGTTATATAATGGGCTTCATGTAAC >952

ACTTCTGCTTTATTCAGTCTAGGTAAGAAATGTAATGGATGTGTGCAGGTGACATAAT
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AATGTCGTGATGCCTATAAATTTTTCTACAAACAAGAGTATGN
>957

ACTTCAGGAGATACATTCTGCTAGTTTGGGGTGGTGTTCTATAAATGTCAATTTAA
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CTGTTCTAGCTCCATAAATTTTTGGAGCTGTTAGGTGCATATACGTTTAGGATTATTTTGTCTT
CTTGGTGAACTAGACCTTTTATCATTAGGAAACTGTCCATATAACCA
>958

ACTCCATAATATATCTTTTAAATGGGCAACTTCTAAATATTGATACAACCATTAATAA
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### Table 4

AATTITGCTCACTACTTCATATCTTTTATGTAGATTATTCCTATAAACATGTTCCCTAAATTCCACATCAGTTTGTAAAGTCAATGGATTAAATTATTCAAATGTAGCTATITAACGGTCAGTAACAATGCCTAGAAACCTATTTATTCATCTGTAATATTAAAAAAGCTGAATTTGATGATCTTGAAAAAATCCTTTCCAGATTTACAACNNNNN

>959

>960

# Table 4

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AAAAAACCAATTGGAAATTTTTAGATGGAAAAGCGTGAAATAAAAAATTCAACACATGGTCTA
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ACAGAATGGTAAGAGANNNNNN
>966

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CCAAACCAGAACTGACATACCAGAATTGGCACCACAAAAGGATATTAAAACAATAACAAC
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GATGAGAAACTGTAGTGTTTGAGGTGAAAAATATGCTAAATGGCATTA
>967

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CCAAACCAGAACTGACATACCAGAATTGGCACACAAAAGGATATTAAAACAATAACAAC
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GATGAGAAACTGTAGTGTTTGAGGTGAAAAATATGCTAAATGGCATTA
>968

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>974

>975

>976

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ATAAAATTTTATGATATGGTATTATCCAGCCAACTGACTTTGAGACTGACAAAATATTCTAACT
TTAACCAGGTGATTCTTTGCATTCTTTGGTTTAAAACCTCAAGTTTAAAAATATCNNN
>978

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# Table 4

CTGCCCTACCTAGTTAGTTGGTCCTGCCCTGGGGCCAGAGTTTCACTAGGGGCTGAATAGT
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CTCACGACCTACAGTGCCTCAGCATCACATGCTATTCATTTTGCACAGCAAAACCAGGAAGT
GAATATGACTGTTATCCCTACTTCACAAGTAGAGAACTCTGAGGCCCTGAGAGGTTAAGAGG
TGCAGGTAAGATTTGAACCTACGGGCTGTGTGCGGTGGCTTATGCCTGTAATCCCTGCACTC
TGGGATTACAGGCGTGGGCCACCACACCCGGCCTACTGCCTACCATTTTGCCCAAGCTTCC
CAGTACTAGAAGAACCC
>982

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AGCCTTCAATCAGTAGGTGTTGAGCTGATTTTCTTTTTCCTTTTTAAACTCAGAAGTTAAGTTC
CAGCTTCAGTGGCTATGCCCAGATGGTCTGATTCTGAAGGACAAGAGAATTCAGTGGCATAA
GCCCTGTGCTTGGCANN
>984

>986
ACATGGAATACATAATTTTGAAATGGAGTCAGGGCTTTCCTAATGATCCATTTTGTAA
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ATATTGAGTTGCACTGGCTGCCTTCTCTTTTTGGTCCCCTAAAGAGTATTTATCATCTTAGATT
CAGCTTAAGTTGTGGACAAATATCAAGGGGAAAAGTATTTACAGTTAACGTTGGAATCACAC
GGTTTTCGNGGGTTGTGCCTCTTTACCCTTCAACTTTGGTGGTTCTAAAGAGGGACGATTAT
TAGTTGCTTTCACTAAGGAGGGGAAGTTCATGATGGAGCAACN
>987

### Table 4

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>991

>992

>993

>994

>995

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ATGATATTTCCCACAGGAACGATATTAGAATTATGTGATGCAATCTCATCCAAGGTCATGGTA
TCAAACCAGACACAGCTAAAAATGTATCATAATAGCAAGGATACAGTAGCAAGGATGGGCCT
CAATAAACATTTAAAGTGGAAAAATTCTTCTCTAACTCATATCAAGTACCTGCCCNNN
>996

# Table 4

>1000

CGCGTCCGCTGTGGTGCGATCTCAGTTCACCATAACCTCTGCCTCCTGGATTCAAG CAAGTCTCCTGCCTCAGTTTCGCAAGTAGCTGGGATTACAGGCATGCGCCACCATGCCCGG AACCTCAGGTGATCTGCCTGCCTTGGTCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCGC CGTGTCCGGCCTATCTCTTTTTGTAGCATAATGTAAATTAGTCTTTATCTCTTAGAGAAGC **ATCATTCTCATATCACATATACTTCAGTGTTTTTGTCCATTCTTGAGACAATTAAAGTTGTACTA** CTTGGCATTAATTAGATTGTGATCATAAGTCAAAATGTCATTGGTTATAAAGTGGTCATCAGA CCATGCAGACTATTACTAATATTGGTTATGTTTTAGTTTATTGCAGTGAAAATACAAAATTTAA **AAGTTATTGTAGAGAATTATCATACCCCCCAAAATGTGTCATTGGTCCTCCAGGACTCTGTAG** TCCCCATCCAAGAAAGACTGTGATAATTGTCAAGGGGTTAGTATGGTCTGAGCATGGTTGAT GGTGCTCTGTCATTCTGGTATTAAACAACCTGCCAAATGTCTTGATTACATGTCCTAAAAAAG TGAGGGGAAGAGTGTAGGACAAATGCAAAATAAAATAACACATTTAGCTATACTTTTAGTATT TTTCATTATGGAGACTTCCATATTTAAGTGACCCGATTTCAAGATTCTTTTATATACAGCCAGT GGACTTTGTGCCTTAACGTAACCTGGTGCATAAGAACGTGGGGGTGGGATAAGGAGCCCTT TCTGCATGTACTGGCGGCCATAATCCAGAGACATGTGTGTCCGGCCCGAACCGGGGGTGAT CTCNN >1003

ACATAGTTCTGCTTGCATTGGTCCCATTACAATCCTGTCTAAATCCTGAAGTAAAAAT GAATACCATAGTGAAGAAATTACTTGTGCATGTGAAAGAGGCTGGTCCAACTCCTTAATTGC AACAGGGATTTGATTCTTCTACTAGTAGTTAGGAAAGGTTGCATTAATATTCAGTAGTTAAAAT GTGCGATTCTAAATTTTTTGTAATTTCCCATGAGAGAATAAATTTTTTCAAAAATATTCCCAGT AGGTGAATGGCTTTAATACATGGTATCTGTGAAGATGGCAAATAAAATGACT >1007

>1008

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GGTTTTTGATCTGTGACTAAACTGTCACCCATTTCCCAGTTTCTCTGCTCCGTCAAATATCAA
CATTTTACCAGGTTTCTCTGTTGTTGCCAAACCTGTCATTTTTATTTGGTGTGGCTTCTTTGGG
AAACTTCCATGGCCCATTTGATGGGAATCAAACAGTGAAAACAAGGACAGATGCAACAGAGG
TGGCATCAGGAACAAATGGGTCATAAGAACTTACCTTGGCAGCACCCCAGAATGGTCAGG
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TGGATTCCTCCTCGCGTTCACAGAAATGAATTAATGGGAGACAN
>1011

## Table 4

AAGCTTTTTTATATTTGACTCCTACTAATAATAAGGATTTGGTGGGGGGAAAGAGAAAATAAA TTTCAATAAGATTTTTCCTCAAGGGAAGCAAACNN >1013

ACGCGGGGGGTCTCACCATGTTGGCCAGGCCGGTCTCAAATTCCTGACCTCAAGTG
ATCCTCCCCGTCAGCCTCCCCAAAGTGCCAGGATTATAAGCAGGAGCCACCGCGCCCAGC
CTATTTTGTTTCTTAAATTTTTTTGTTTTTCAGTCACCACAATTTCACCATGCATAAATCACAAC
GGTTAACAATTTAGCATCTTTGCCTTCTTTTCCTGTGCACTTACGTTTTTATGTAGCCAAGATC
ACACGTTGCATTTTGCTGCTTTCCTTAACAGCGTCTAAGTCATCAGCACTCTATTGTGATGAT
TTATCTTAAAAATATTCCAAGCGATCATTTTTAGTAACTGTGTAATATTATATCATAAAAGTTAAA
ACATAATTTGTCATTCAATTGTTGAAATTTTTAGTACGTTACGTATATTTTCTCTTATAAATATGTAA
ATATGTTTATAAAAAAGTTATATACAGTTTTTTATAAATCTTTGTGCATACTTTATACTGTTTCCT
TAGCATAGAGACTGTGGAATAGGATTTCTTGAAAAAAAGGTAAAAAGTGTGAGTATGCATATATA
CTGGTACATATATGNNN
>1014

>1015 >1016

**ACAGTATTATGTATCCATAAAAATTAAAAAATCTTTAAAAAATGCATATGGGGGTCAG** AGATCCAGCTCAGTGATCATGCGGGGGAAAAGGCCCGGCATTGCTGGAACTCCTAATATTT AAAAGATGATGGAAACTTGAAATTTTATATTTAATCTTCTCATTTTTAAGTGTTGGCAATGTA TTGAAGACTTTGAAGCCTCTCTGCTGGTCAAACAAGATGTATCTGTAGGCTGGATTTAGTCC ACAGCTGGCCAGTTTGAAAACTGAATCCTGCTAGCCTTAATTTAAATTTTTTAAATTTAAATTT **GCTTTGATTCCTGCACTCCTGCTCAAAAAAATCTTCAATGGCTCCCCACTGTCTGCAAGGTAA** AGTCCAAACTTTGTCACCAGTCCTTCAAAGCAACCCATGACTATATCCAAGACCCCAAACCAT **ATTTCTACCTTATAGCCAGTCTCCATCTTCCACCGCAACCAGAATGATAGTTGAATTGTACTC** TAGGAAGGAAAATATTCAGAAAGGCACCAGTCCTGGCCATGAGGGCTGCTTCTGGGTCCCT **AAGCTTTTTCCTTTCCTGCAGTGCCCTACACTGTGCATGCCTATCAATGAAACCCTGTCCATC ATTAACCATCCAGCTCAAATACCACCTCTCCACAAAACATCCCTGATGGCCCAGCCAAATGC GTTTGGGTTTTGCACTATATTGAATATCCCTGTAGTGCTTTGTACATAGCANNNNN** >1018

>1019

ACTTACAGTCTTAAGATATCCATACACCCCCACATCCGTCCTTTGTGCGAGAAGATT
ACTGAAAATTTAATTCCATTTATGTCATTGGATTTGTAAAAAAACCCCTTCTGGATTCAAAGATG
AAGGCCTCACTTACTTTATTTTTGTCATTTTCACAGACCCCTTATGTAAATGCCTCAAGAGTAA
GAATCTTGCTCAAGTGATTTTTGTATCTCCAATGGCTAACAAGGAGCCTGACATAGAGTAGCT
GCTTGGTAAATATGTGTTCATTCATCAACAAATACCCCCAAGGNN
>1022

### Table 4

ACTTGTTTCTCCCTTCGGACCACTCTCCCCACTAGACAGCTGTATGGCCGGCTCC
CTCACTCTCAGGTCTATCAGAGGGTGGCCACTGACCTCATTGTCTCAAACATTATATAG
AACACACACGCACCCATGCACGCACACCGTCGTTCTTCATCCGCCTGGTTCCGTGCACTATT
CCAGGACCTACAGCAGTGCCTAGAACACAGAACATCCATTAGCAACATTTGTTTAATGAATTT
ATAGTGCCTAAACCTGCACAACTCTGACTTTGCCTTGCTATTAGAAAATGCAAGGCCAGGCG
CGGTGGCTCACACCTGTAATCCCAGCACTTTGAGAGGCCGAGGTGGGCGGATCACTTGAG
GTCAGGAGTTCAAGACAAGCCTGGCCAACATGGCGAAACCTATTCTTTACTAAAAATACAAA
AATAACCTAGGGCTGATGGCATGTGCCTATAAN
>1026

NNNNCGANAGTCTTCTAGNATTAATTAACTTAGTTGAAAGTGTTCTGAAACTTGCCAG **ACTCAAAGTGTAGAGCACAACAGCAACTGTGCTTGACCGTACTCCTTGGTTTACATCTATTGT** CTTGACAAAAATATTAATAGCATTTCCTTTCACTTTTAGAAATACTCGAGTTTGTATGATAAATT TTAGGTTCACTTTACCCTCATGCTATAAATTGGTGGTGTTCTGGTTGGACTTGGTGAATCAGG AGATTGTATAATCAACAATTACCCAAAGCAGAGATTCTGATTTAGTAGGCCAAGGGTGGCCT **ACTAAATGTGCATTTTAAGAAGGCATGTCTAAGGATTCAGGTAGTAGTGTGAGAAGCAGTAC** TCTGTTTCTGGTACTGAGGCTAATGGTCTTAGTTGGGATAAGGAGAGTGGGGAAGGGGCAG GGGGAGATGATGAAATTCATTTATCCTCTGTGATGCTATGGAAGAACAATTAAGATCATGTTT CCTACTTGATTTTAGTTGCTAGTCATTTCTTAATCTAAGCACCCCCTATAATTTACCTATGTCA TCATGCAAAATCACCATCGGTAATAATGTGGGGGGCGGGGGAAGTCTATACAAGAATATTAAG GCCCTGTGCGTGAGCATGTCTATAGTTAAAGACTTAATGAGAAAGCATCAAATTGTGGTGCA AACAGCTGAAAGTAGAAGTAAATCACAACGTAATAAGATGCAACTTTGGAGGAGCTCAAAGC AACAGATACGTTTTTATCCAAAAAGGAGTAAAACAAAAAAATCGTCAACGGCAGTTCCTTCAG TCCATTTATACTTTTAATGTTTATTAAATTACTTTTCTCTATAGATATGCAGATAAGATGTTTT AAATGTGTAAGTGGTATAAATGTCCCATGTGTCTTTTATTCTAGAGCATAAGAAAAGATGGGA **AGCTACCTCAAACTTGTTTTGAGGCAAATGTAGTATGAATCCCTAAACATAACACCAGTACTG** CTAAATGACAGTTATCTAATCTCACTGATGAACAAGAATANNNNNNN

ACTAATTCTTTTCCTCTTTCCTAGACCGATTCTAGTTTGTTGCCTTCCCTTTCCTCGG
AAACCCCAAGTTTGTGGATGCTGCAGACACTCTGTGCCCCCCTGCATGCTGGGTGCCTGGC
CAGCTGCCAGGGCATAAAGACAGAGACGATGTGGCCTTTGTCCTTAAGAATGAGGTTTGAAA
GCCCCAGTTCTTCCATGTTAGGTGATTTCTTGCAGCTCTTGGTATCTGCAGAATTAGTGTGAA
TGCTTAAAAAAATATTAACAGCTTTATATCATGAAAGTTTTAACATGN

>1028

>1029

ACTTTGACCTGTATGTAAACTCTAGTTACTTTGGTCTTCTCAGGCTCTTGACTCTTTC
ACAATTAAAGTAGTCTTTGAGGCTCAGCCTGCTTTCCTCATAGCTATGCTATGGCCTGGACA
CTCAGGGGAGTATAAGCTGAGGCAAACATGGACTCATTTGTTTTCTAACTTTCAGGGATTATT
GTCCATCATTGCCTGATGTCCAGTGTCTTGAAAAGCAATT
>1031

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GCTTCCAACTTGTTTAAGACCATTCCCAGAGTGAGAGCTGATTTGCCATGGTTATGAAGCTTT CAGGATATAAACTATAAGAATGACAAACTACAGCAGTTGAAAATGTGTCTTCAGATACTCACT TGCAACTCCCATTTATGTCTCTAGGGATTGAGAAATGAGGATCGAGGGACCAAATCTGGCTT GGTCAGTAAGAGTGTAGGTAACATATAAATATTAATGTTCGTTGCAGTTAGTGTGGT >1032

NCTGTTTCCTGTGTGTAAAACGACGCCAGTAGTCTGGGTCATAGCTGTTTCCNNNN CAGCTCACTGCAGCCTCAACCTCCCGGGCCCAAGCAATCCTCCCACCTCAGCCTCCCAGT AGCTGTGTTCCAAAGAAATTTATTTATAAAACAGGTGTTGGGCTGGACTTGACCCGTGGGCC ACAGTTTGTCAACTGCCATTCTGTAAGCTTAACATGTGTTAATTACTGCAATCTGAATAACAAT GCTATGATATAGACACTGTGTTCCTTTTAATAGACAAAGGAACCCAGGCACAGAAGGATTGA CTAATATGACCAAAGTCACACTGCCAGTGAGTAGCAAGCCTGAGCTCTGAACCATGACAGTT CACATCTTCCACGACAGCAGCTTCTCAATGCTCTTTGGAGGGACCAGAGCCCAGGCAGTAG CAACGGCTATGAGGTGGTGAGACATGACCAGCAGATAAGCCCTGGGCAATTGGCCAGAGCT GGAGGGAGTGGAGACTAGCCATNTGTGACTTTGTGAACATCCCTGGGGAGTCTGGAATTA NNNNNN

>1033

ACTAGATTGGGTGTGTGTATTAAGAGAAAGACAGGAGTCAAAGATAGTTCCAAAACT TTTGAACAGAACACTGGATGAATACTGTTTACTGAGATGGGGAACACTTAGAGAAAAATGCA TTTGGAAAGCAGAAATACGATCAAGACTTCCATTTTTGATACATTAAGCTTGGTATGTTTAATT CATAGCTATATAGAGGTATTAAATTGGCAGGACAAAATCATAGCTAGAGATAAAAATTTAGAG TTCACCAGTGTAAAGATGATATTTGATGGCACAGGATGGACTTTCTTCTGGGATTTGAGTATA CATAGAGGAAAGATGTGAGGATTGAGCACCAGGGGGACTTCAACATTGACAGGCTCAACAGA GGAGAATTCCCAAGAGGATGAGGTTCCACCTTTAGGACCGCCAAAGAAGACTTCCCAGACA AGN

>1034

>1035

ACCATITAACTGAGTGAAAGCTTTACAATTGAGGGGTTACTCATTAGCAGGACCTGG GTTTTGTTTTTAATCTCATTAACCCCTTGTTACCCATTTGATAACAAAGACTTCAAGGAAGAAT CCAGCAATGGAAATGTGGGAAAATTCCAGATGCTAAATGATCTGGCTTGGACCCAGCAGGTT GAGGTAGTGGAGCCTTTCGATTGAGGCACAGCCCAGGACTGCTGCAAGGGAGAGGCACAA **CAGATA** 

>1036

CCCACGCGTCCGATCAAACCAGGAGCAGGTGCAGCCCGGAGGCCCCCCCGTGG GGAGAAGCGGCTGGGGGTCCCTGCATCTTGTACTGCGGCCCCTCCAACAAGTCGGTGGA TGTCCTGGCAGGACTGCTCCTGAGAAGGATGGAGCTGAAGCCCCTCCGTGTGTACAGTGAG CAGGCTGAGGCCAGCGAGGTTCCCAGTGCCGCGTGTGGGCAGCAGGAAGCTGCTCAGGAA GAGCCCCGGGAGGGGGGGCCGAACCAGAGCCTCAGGAGCATCACCCTGCACCACCGGA TCCGGCAGGCCCCCAACCCTTACTCGTCGGAAATCAAGGCCTTTGACACCCGGCTGCAGAG AGGGGAGCTCTTCTCCAGGGAGGACCTGGTCTGGTACAAGAAGGTCTTGTGGGAGGCTCG GAAGTTCGAGCTGGACCGGCATGAGGTCATCCTCTGCACCTGCTCCTGTGCAGCCTCTGCC CTGAAACCCTCATCCCCCTGGTGCAGTTCCCACAGGCCGAGAAGGTGGTTCTTCTCGGAGA CCACAAGCAGCTGCGGCCTGTGGTCAAGAATGAGCGGCTGCAAAACCTGGGTCTGGACCG GAGGGCATCTGTGCCTTCCCCTCTGTGGCGTTCTACAAGAGCAAGCTGAAGACGTGGCAGG GCCTGAGGAGGCCGCCAGTGTCCTGGGCCACGCTGGCAAGGAGAGCTGCCCTGTCATCT TTGGCCACGTGCAGGGCCACGAGCGGAGCCTGCTGGTGTCCACGGACGAAGGGAATGAGA ACTCCAAGGCCAACCTGGAGGAGGTGGCTGAGGTGGTCCGTATCACCAAGCAGCTGACCC TGGGGAGGACCGTAGAGCCCCAGGACATCGCCGTGCTCACGCCCTACAACGCGCAGGCCT CTGAGATCAGCAAGGCCCTTCGGCGAGAGGGCATCGCCGGGGTGGCCGTGTCCTCCATCA-CCAAGAGCCAAGGGAGCGAGTGGCGCTATGTGCTGGTGAGCACCGTCCGCACCTGTGCCA AGAGCGACCTGGACCAGCGGCCCACCAAGAGCTGGCTCAAGAAGTTTCTGGGCTTCGTTGT GGACCCCAACCAAGTGAATGTGGCTGTCACGCGGGCCCAGGAGGGGCTCTGCCTGATCGG AGACCACCTCCTTCTGCGCTGCCCCCCTCTGGCGTAGCCTCCTGGACTTCTGCGAGGCT

#### Table 4

ACTCTTATCAACTGTTTTATAGATGAGAAAACATTAGCCACAGCTTAGCTTATTTGAA GTCACAATAATATTAACTAAGTAAGAGCAAAAGCCAAGATTCAAATGTAGATTATTTTACTACA GACTGAGAAACGAATTAAACTAGGAGCCTAAGATACTTTCTGGAATTGAAATGATACATTATA TATACCTATAAAGATAATTGGCTATAGCTTCCTAAACTACAAATTGTCATAAAAATGACTTCTG TCCTATATCAATTAGAAACTGGTATTAAAATTGAGTATTATAAGACAATAGAATGN >1041

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GTGTGCAGTGTTTAGACATCATGATCTAGGCAAACAGAATTCCTGGCCTGAAATATGTCACT
AGTTAGAAACATTAGAAGCTTTCAGGTAAATAAATATAAAAAACCAGTCAACCGTATTCTTATT
TCTTCGTCAGAGAATCATGTGTCGTTTGGTTTAACTTCCTGCTGGATTCTGGATGGGAGTTGT
TGAACATATTAATCTCATTATTTTCTGTAGAGGACAGGTTGTCCCCCCCTTCCTCATTAGCGC
CCTGACTGCTTGTTAGGGCTCTCTGCCTCTGGCCCTGTGACCAGCACGGTTGCTCCAGCAG
GCAGCAGTGCGTGGGCCTGCTCCCATGGCAGAGACAGGGCTGTGAAGCTTGGGT
>1042

ACCCTGCTTTGATTATTTCCGAATCCAGTGGGTAGAGAAGGTAAAGGCAAGGGCTC

>1043

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>1045

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>1051

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### Table 4

AAATTTTAAATTAGTTAATCTGGGTTGGACCTGAGTCTGCGTTTCCAACAAGCTCCCAGGTGA TGTCAATGCTATTGGTCCAAAGACTATGTTTTGTGTAGCAAGGGTTCTAGATACAATTACATT AGAAAAGATCAGAGAAAAGTGGAGTGATTGT >1052

ACATTAACTCACTGACTTACTCTGGGTTGCTATTGTATTAAAATTCTGTATAGACATTA
CGTAGCCTCAGAGTTGAATTTGGACTGCCCTTAAAATAAAAAATTCTTAAATCTTTAGTGTGG
TGTCTATTAATTTTTATGATGATTTACAAGTTGGAAATGATTACTTTGCAAGTCATAGTTTACTT
TGAAGTTAATAAGAGTGATTACAGTAAAGGAAAAATGCCATATATGGCATTGTTCTTAACAGC
TTATGAAATTTGGAAAACGATATTTTAGAAAGCTTTCTCTTGTTGGCTGGAATGAAGN
>1057

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>1059

>1060

CCCTTCGAGCGGCCGCCCGGGCAGGTACAGTTACCAAAACCCATCCAACTAAAAAT TTAAGCTTTTTGCATTTTAGTGGATGCAAATTGTGTCTTAGTAAGAAGAACATACAAAACTAA GAAAGATAATGTTGAAGAAAATAACAAAGCTTAAGGACTTAAACTATTACCATCAAGACATGT ATAACTACAGTAATTTTAAAAACTGTTTTCTTGCATAAGTATAGAGAAATGTACCTCGGCCGC GACCAC

>1061

ACTITAACAAATTAAAAACAAATTITAATTTAAAATATTTTAGAAATTITTACTTAATACA
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>1063

>1064

>1065

>1066

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>1068

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NNNNNNNNNNN

>1069

>1070

>1071

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>1076

ACTGGGTCACTCTGCCCAGCTCTCCAAAGGCATCAAGATCCGACTGCTAGGAGCC CCGGCTTCTTCCCTGACCTGCCGTCTCCTACACCCTCTGGTCCTGCTCCACACTGGTCTAA TAACTGGTGTTCCACATTCCTCTAACGTGCACAACACACTCCTGCCCCCGTGCTTTTCACCT CCTGTCCATTCCTCTTATAACGCTCTTCCCCAAATCGCTTGCCCATGGCTTGTTTGCTCATCN NNN

>1075

>1076

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AGTATAGCATTGTCATTACTTTTTGCTGCACAGATTACTTGCAAGAAATATTCTAGTCTGGGG
CATAACAGAATCCACAAATTCCAGATTTAAGAAATAGGTCTATATAAAGCTTATTTAATATTTG
GTATANNNNNNN
>1077

>1079

>1080

>1081

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TGATGACGAGGATTATGAAGAGGGAAGAGGAAGAAGAAGAAGAGGCTACCAAAGGCAAA
GAGATGGATTGTTTAAAGAACGGCCTCGGGGCTGAGAGGCACCTCATTCCCATATGGCCAG
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GCAGCCTGGCTTCCAGGCCCCACACCGACCCCACATTCTGCCCTTCCCTCTTTCTCACCAC
CGCCTTCCCTCCCACCTAAGATGTGTTTACCAAAATGTTGTTAACTTGTGTTAAAATGTTAAAT
ATAAGCATGCCCATGGATTTTTACTGCAGTTAGGACTCAGACTGGTCAAAGATTTCAAAGAN
NNNNNNNNNNNNNNN

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#### Table 4

GGCTTCCTTTTGGACCGCCGAGGAGGTGGACCTCTCCAAGGACATTCAGCACTGGGAATCC CATAGTAAATGAAAACTTGGTGGAGCGATTTAGCCAAGAAGTTCAGATTACAGAAGCCCGCT GTTTCTATGGCTTCCAAATTGCCATGGAAAACATACATTCTGAAATGTATAGTCTTCTTATTGA CACTTACATAAAAGATCCCAAAGAAAGGGAATTTCTCTTCAATGCCATTGAAACGATGCCTTG TGTCAAGAAGAAGGCAGACTGGGCCTTGCGCTGGATTGGGGACAAAGAGGCTACCTATGGT GAACGTGTTGTAGCCTTTGCTGCAGTGGAAGGCATTTTCTTTTCCGGTTCTTTTGCGTCGATA TTCTGGCTCAAGAAACGAGGACTGATGCCTGGCCTCACATTTTCTAATGAACTTATTAGCAG AGATGAGGGTTTACACTGTGATTTTGCTTGCCTGATGTTCAAACACCTGGTACACAAACCATC GGAGGAGAGAGAAATAATTATCAATGCTGTTCGGATAGAACAGGAGTTCCTCACTG AGGCCTTGCCTGTGAAGCTCATTGGGATGAATTGCACTCTAATGAAGCAATACATTGAGTTT GTGGCAGACAGACTTATGCTGGAACTGGGTTTTAGCAAGGTTTTCAGAGTAGAGAACCCATT TGACTTTATGGAGAATATTTCACTGGAAGGAAAGACTAACTTCTTTGAGAAGAGAGTAGGCG AGTATCAGAGGATGGGATGATGTCAAGTCCAACAGAGAATTCTTTTACCTTGGATGCTGAC TCAGCTGAAGTGTTACCAACTAGCCACACCATGAATTGTCCGTAATGTTCATTAACAGCATCT TTAAAACTGTGTAGCTACCTCACAACCAGTCCTGTCTGTTTATAGTGCTGGTAGTATCACCTT TTGCCAGAAGGCCTGGCTGGCTGTGACTTACCATAGCAGTGACAATGGCAGTCTTGGCTTTA AAGTGAGGGGTGACCCTTTAGTGAGCTTAGCACAGCGGGATTAAACAGTCCTTTAACCAGCA CAGCCAGTTAAAAGATGCAGCCTCACTGCTTCAACGCAGATTTTAATGTTTACTTAAATATAA ACCTGGCACTTTACAAACAATAAACATTGTTTGTACTCACAAGGCGATAATAGCTTGATTTA TTTGGTTTCTACACCAAATACATTCTCCTGACCACTAATGGGAGCCAATTCACAATTCACTAA GTGACTAAAGTTAAACTTGTGTAGACTAAGCATGTAATTTTTAAGTTTTAATTTTAATGAA TTAAAATATTTGTTAACCAACTTTAAAGTCAGTCCTGTGTATACCTAGATATTAGTCAGTTGGT GCCAGATAGAAGACAGGTTGTGTTTTTATCCTGTGGCTTGTGTAGTGTCCTGGGATTCTCTG CCCCTCTGAGTAGAGTGTTGTGGGATAAAGGAATCTCTCAGGGCAAGGAGCTTCTTAAGTT AAATCACTAGAAATTTAGGGGTGATCTGGGCCTTCATATGTGTGAGAAGCCGTTTCATTTTAT TTCTCACTGTATTTTCCTCAACGTCTGGTTGATGAGAAAAAATTCTTGAAGAGTTTTCATATGT GGGAGCTAAGGTAGTATTGTAAAATTTCAAGTCATCCTTAAACAAAATGATCCACCTAAGATC TTGCCCCTGTTAAGTGGTGAAATCAACTAGAGGTGGTTCCTACAAGTTGTTCATTCTAGTTTT GTTTGGTGTAAGTAGGTTGTGTGAGTTAATTCATTTATATTTACTATGTCTGTTAAATCAGAAA TTTTTTATTATCTATGTTCTTCTAGATTTTACCTGTAGTTCATACTTCAGTCACCCAGTGTCTTA TTCTGGCATTGTCTAAATCTGAGCATTGTCTAGGGGGGATCTTAAACTTTAGTAGGAAACCATG GAGATGGAGTCTCGCTCTGTTGCCCAGGCTGGAGTGCAGTGGCGCGATTTTGGCTCACTGT **AACCTCCATCTCCTGGGTTCAAGCAATTCTCCTGTCTCAGCCTCCCTAGTAGCTGGGACTGC** AGGTATGTGCTACCACACCTGGCTAATTTTTGTATTTTTAGTAGAGATGGAGTTTCACCATAT CTGGGATTGCCGGGTGTTAACAATTTTCTTATAGGGGACCTTGAATTAACTGCCTTTTTTGGG **CGAGAAGCTCGGACTTGCN** 

>1083

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NNNACATTATCCACATTTAACACCTTTTCAGTTGATGGCTGATTATCTGATTTTGCAA
ATGGTGCCTCACTGTGGGGATCCCCTCCTCTATTCTCAGATGTGGTGATGGTCCCCTCGTTT
TTCGACGTGCCTCCCGCTGTGGGCTGCAGTGTCATATGAATCTCGGAAGCACATTTCAGAA

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#### Table 4

GTCTTTCTATCTTTTGTTCATAATCTTTGAGTAGTCTCTTCACTTCTTGTTGACTCTTCTGTGA AGGCAGCTCTTCACACAGCTCCCTCAGGACTTCCATGTGGTGATTAAGCTGGTACAGGCAG AAGTTTCTTTATTTATTTGCTTTTCAAGTTTTAAAATATTGTCACTAAGCTTTCCTTTTTC AATATCTATTTTAGTTGTTGAACATATAAAGACAGTTCATGATGAAGAGACTCCCATTTGGCA CAGACATCTCTACTCTTTCTTCTAAAGACATCTTTATGTCCTCAGTTACATTATTTTTTAGTTC TTCAACAGCTTTCAAATACTTGGCCAGACTTTTTGTATTAGAAATTATTAGTGCTTCCTTGTGT TTTGAAATGAGTTCACCGGGGCTCTCTCTTTGCCCCAGTAACTGCTGAGCCCTCATCATATA TGATTCAAGTTCCTTCTGGGATTCTTCCATCTTCAGCCTGATGTCCAAATCTGGTGAAACGTC AGTTAAGTTCTTCAACGCTGCAATGAGTTTTACCACATTGATCTGGACTTTCTCTTTAGCTTCT TGAATCTTTGCCTGAAGCCCAGTTGTGAGAACATGTTGAAAGGACTCCTGGCTTGAAATATTT TGTATATCCATTTGTAACATATCTTCACTTCTTGCCATAAGCTTTCATCAAACATAGAGCCCTT TGGCAATAAGATGCTTCAAAGATTCTTCCATTGAGGTGTCCACATCATCTTGATCCAAAACAG ATTTGGCTTCTGCCTCCAGATTTCCACTTGTCCAATGAGTTTTTCAACATCTTTAGCCACTTT TAGTTGCCCTGTGAATTCTTCATTTTCTTTTCATGTTTCTCTCCAGCCTTTATATTTTGATTAT AATTTTCAGGAAGTTCTACTGACATATCTGTTGAAAACTCAACAGTTGCTTTCTCTTTTAGA TAGAATATTTCCAGAATTGTCAAAAGTGGGCTGATCCTGTTTTTTTATCATCAGTGGCAGGTT CATTTCAAGTTGAGTTTTTGAAACCAACTTTCTCCATCTTTTATTCAGCCTTCTCAGTTCTTTA GAAATAGATGATCCAACCACATCATTGCTGACTTCGACTAAGAAATTTCCTGCTTCATTTAAA TTTGTCTCCTCAAAGCAAGCCCTTAGTAAGCGAAGGTTTTCCACATAAGTAGCCCAACATGC TTCACCATCATATACTGTTTATTAATATTCTGACATTCTCCAGCCAAATTCTTATAAATTTCTCC ACATTTTTGAAAAGAAGTATCAAGTCGAGCTAGGAATTCTTTTTCTTCAATAAATTTATGCCAG TCTTCCAGCAATAATTCCACAGATTCTCTGCTCCCATATTTAATGTTCCAAATATCCAATTTTG ATTTCACTTCATCTACCAAACCAAGAACTAAGCACTTGTAGTAATGAAATTCTAGAAGTAGAA TAAATTTTTTCTCCAAAATGTTGTTGATTCGTCTTTTCATTTCCTCCAATTTGTTAGGTGGTAC CAATGGCAAGTGATTTTCATCCTTATTTTCAAAGGTAAGGAGAATGTTCGAATGATGCTCAAA TCTATCCATCAGGCTCTTGAATAAAGTCATTTTCTCTTGTATCAGAGTCACGGCTTGAGAGTG ATCCTGGGAGGCTGACAAATCTTCATCCATAAGCTCTTCTACCTCCTGGAGCCAAGCTTCAG TTTGATGGAGGGGTGGGGCAAGGCATAATTTAGCTTTATTTTCCATGCATTAATCTGGTGA TCGAGGCCATCCCAGGCTTCTCCAACTGTAAATGATCCTTGTCCAGCTCATCCAGATCCCG TTTTATTGACAGGACATCCAAAAAGGACTTTTTTTCTTCATTGAATGACTCCATAAAGGACAG CAGGCTATTATACTTTTTAAAGTAGGTATCATTCTCTGAATCCTTTAGCAACTTCTGTAGTTTT TCCTTTTGCAGAGTTAACCAGCCCATAGCATCTTTCACCTTTCCCTGAGCCTCCTCCCAGTC CCAGGGGCATCTTTGGAATACTGCAGAAACTGTGCCACATAGGTCATGATGGACTTTTCATC AGGATCAACAACATCCACATCTTCTGGTTCCAGCAATCTGGGGGATTTTTAATTCTTGTTCTGC **AATTCTGAAGGCCTCTCTCAGATTGTCTTTGTTGGATCTATGCTTCACACTCTTCATGTCAATT** AGGTCTGGTCGCAAGGCATGAATGATGGCCAAAAAAGCCATCCCATTTCTCCAACTTGACTT **AAAATCGGTCACATTGACAGACTCATAGGTGGCGCATTGTTCCTGAGCCCACAAAAGAAG** GCCTTTCTTGCAGACATTTGCCATCTTGCTTGCACTTTAGAGCATTTCTTAGCTGGAGGACTT GAGGCAGGAGATGAGTCAACCACACTCACATCATCCAGGGAAGGCTGATTGTAATTGCAAG AAAGAGTCTGGGCAAGCTTCTCAATATGAAAGTGCAGGATAATTGTCCAAATTAGGCCAAGG TTCTTAGGAATGTCAAGGCATGTTCTATATTGATTCTACACTGGAAGGTATTAGATCCTTTATC CCGAGGCAACTGTTGCCCAGAAAGTACTTCTAGCAGATCCAGGAGGACATGCCCCTTTTTAA TGTCTGTGAATAGGTCGGATATAACTGAGGGAGAAGTGTGCCTGGCCAACTGTGAGTTTATC CAGCACGTGAAGGCTTTCTTCTGGGTGTCTTCCTGTTCAGCTTGCAATGAAATATGGAGATC GTCGATGCCCCAGGAACCCTGTTCATCTTCGGTGGGAAGCTCAGGACTAGATGCCATTCTTT GACTCAATGGAGATTATATCATGTCCATCTCAGTTGAAGAAGTGAACGTCCGCCCGGCCGAG GGGCAAGGGCGGGCCGGGGCCCCGAGGTCGGCGCCCCGCTTGCCTGGCTCTCTGG ATCGCGCCTTTTGCTCGCTCTCCCTCTCGCTTTTTCAGGTCCGGCCGAAGGCTCTGGGCGC **AGCTGAGCTCGTGCC** 

NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNGGAGACAGGGTCTCGCTCTATCACCTAG
ACTGGAGTGCCTGGTGCAATCTCGGCTCACTGCAACCTTCACACCCCAGGCTCAAGTGTCA

### Table 4

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NNCACGAGGATTCCTTCTTTTTGGTCGGTTCTGAGTGTGGGGTGTCTACTGGG GATCTGCTAAGGCTAAGAGGCAAAGATAGGCAAGTCACTCCCCTGACCTCAAGAAACTCCC **AGTCTACAGGCGAAGATACACCACCCACCGGTAGAGTCGCTGGACCAGAATATTAGGTGTT** CCAGTCAAAGTCACCCAGATTTGCCAAAAGACCTGGCACAAATGTCACTTCCACTATGAAGT CCCACTGACTTCCATATACAAGACAATCTGCTGGGAATTTCTTGGGTTGACAGCTCTTGGAT CAGAACATGTAATAATGAAGTGGTCAAAATGCAGAGGCTAACATTAGAACACTTGAATCAGAT GGTTGGAATCGAGTACATCCTTTTGCATGCTCAAGAGCCCATTCTTTCATCATTCGGAAGCA ACAGCGGCAGTCCCCTGCCCAAGTTATCCCACTAGCTGATTGCTATATCATTGCTGGAGTGA TCTATCAGGCACCAGACTTGGGATCAGTTATAAACTCTAGAGTGGTAAGTGTCTTCACATTCT TTAAGCACTAAAGAAACTTTTAATTAGCTACCTTGCTTCCAGTAATCAAACTAGAGCTCCTCT GCCTTGTGTAAGTTGCTATAAAGTATTGACTATTAGAATGTCTTGAACTTTGGTTACTGTGAG CCAAGTCGGTGCTCAAAGTATATTTCATAGTCTCAATTATATAGTAATTTAGGTTCTGAAAAAT AGGTTCTGTCTTTGCATATGTAATATTTTGTGAGTATTTACTTTGGAAAGTTTGGTCGACCTAA TTGATGAAGCTATGTCATACTGGTCGATATCAT >1089

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TTTCGCGAGTGTGAGAGGGAAGCGCCGCGGCCTGTATTTCTAGACCTGCCCTTCGCCTGGT TCGTGGCGCCTTGTGACCCCGGGCCCCTGCCGCCTGCAAGTCGGAAATTGCGCTGTGCTC AGAAGGAGGACGTGGCACGGTGGTCGGCATCGACCTGGGGACCACCTACTCCTGCGTCG GCGTGTTCAAGAACGGCCGCGTGGAGATCATCGCCAACGATCAGGGCAACCGCATCACGC CGTCCTATGTCGCCTTCACTCCTGAAGGGGAACGTCTGATTGGCGATGCCGCCAAGAACCA GCTCACCTCCAACCCCGAGAACACGGTCTTTGACGCCAAGCGGCTCATCGGCCGCACGTG GAATGACCCGTCTGTGCAGCAGGACATCAAGTTCTTGCCGTTCAAGGTGGTTGAAAAGAAAA ATTTCTGCCATGGTTCTCACTAAAATGAAAGAAACCgctGAGGCTTATTTGGGAAAGAAGGgtac ccatgcagttgttacctGTACCAGCCTATTTTAATGATGCCCAACGCCAAGCAACCAAAGACGCTGGA ACTATTGCTGGCCTAAATGTTATGAGGATCATCAACGAGCCTACGGCAGCTGCTATTGCTTA TGGCCTGGATAAGAGGGAGGGGGAGAAGAACATCCTGGTGTTTGACCTGGGTGGCGGAAC CTTCGATGTGTCTCTCTCACCATTGACAATGGTGTCTTCGAAGTTGTGGCCACTAATGGAG ATACTCATCTGGGTGGAGAAGACTTTGACCAGCGTGTCATGGAACACTTCATCAAACTGTCT

# Table 4

TCTCAGCATCAAGCAAGAATTGAAATTGAGTCCTTCTATGAAGGAGAAGACTTTTCTGAGACC CTGACTCGGGCCAAATTTGAAGAGCTCAACATGGATCTGTTCCGGTCTACTATGAAGCCCGT CCAGAAAGTGTTGGAAGATTCTGATTTGAAGAAGTCTGATATTGATGAAAATTGTTCTTGTTGG TGGCTCGACTCGAATTCCAAAGATTCAGCccacactagcgttcacaagcagatacatatccacaatggacaaggc cattcatgggtgcatcaaaagcatcaccaggtgcacactggataatagcgttggatagtatggtaccctccaccacctagggatactcga cacactggtgcgagaagagcagctcacctgaccccaacaccagcagtccacaacgggacaccccaagctggaagcacatacaac aaagaaaacgacatccaggactccaccacacctacacggactctcccggactcccatccacgcgccaaactggataaacccaacta gtgcgctaccaactcgcgccctccccggacaccgccgcaccaccccccacgccattggacatcccacaacaaccacgccgggcac acacaacgacaacaactccgccacacgactacacaccactacagcccgccactaaccgcaacgcccccaccccaggcacaca ctacgccaacccgccaccacggcaaccacgcgcgatgccacacaaacacaaccgggcgaccaccccgctcccacaccacaca accaacacgcaaacacctccccaccaccaccacaacaacaacgaactcccaggcccagggatagacactagcacaccacac gtgaaccgcacacaccaccacccaccaaaacggcgcactggcgcacataacccggcacgccgacgcagcacgacgcaac ccgcacgccgagatcagcaaaccacaacaggacccacgcggtcagccgtcgccggcacctccacgacaacaccacagc cagegaceagaceaceageceatacaegecetacaeagecaaeegececetgeaeegeaeaegeaageaacaaeaagegaea ggctgaaacagcccgccaacgcaccagccccctgcagcgaccacggaccaacaggggcatgcaccagtagcaccgagaca actggacagcgccacgcaccacggcagtacacgatccaccgacgca >1094

acgCGtCCgtCttgaatgCAAAAAATatatatagATACAAGTCTATCATTTACTACCACAAAACA CACAAATCAATTAAAAGTTAAATTTTATGAAAACATACAGACTGTACGTGTAAGCAAATTTAAA ATGCAGTATTAAATCATAACTCTATAGCCGCCACTGTCCGGCCACAGCCTAACGCTCTTCGC TGTCGTTTGCGGTCTCGCGCAGGGCGGCCCCGGTTCTGGTGTTTGGCGTCGGAATTAAACA ACCACCATGTCGAGCAAAAAGGCAAAGACCAAGACCACCAAGAAATGCCCTCAGCGTGCAA CATCCAATGTGTTGCCATGTTTGACCAGTCACAGATTCAGGAGTTCAAAGAGGCCTTCAAC TCAATTTCACCATGTTCCTGACCATGTTTGGTGAGAAGTTAAATGGCACAGATCCTGAAGATG TCATCAGAAACGCCTTTGCTTGCTTTGATGAAGAAGCAACAGGCACCATTCAGGAAGATTAC CTAAGAGAGCTGCTGACAACCATGGGGGATCGGTTTACAGATGAGGAAGTGGATGAGCTGT ACAGAGAAGCACCTATTGACAAAAAGGGGAATTTCAATTACATCGAGTTCACACGCATCCTG **AAACATGGAGCCAAAGACAAAGATGACTGAAAGAACTTTAGCTAAAATCTTCCAGTTACATTG** AGTITCACAGCTITGCCTCTTCTTTTGATGTATTTATTCCAGACCTTTCTGCCACTTAGCACT TGTATAATCAGACTGGAAATGGGGATGAGGGTGGGGGAAGTGTCTGAGAAGTAAAAGAGAG TAAGacaatGTAACTGGAAgattTcaggaTGCGTGTGAActcGaTGtAATTGAAATTCCCCTTTTTGTC AATAGGTGCTTCTCTGTACAGCTCATCCACTTCCTCATCTGTAAACCGATCCCCCATGGTTGT GGCGTTTCTGATGACATCTTCAGGATCTGTGCCATTTAACTTCTCACCAAACATGGTCAGGA ACATGGTGAAATTGATGGGCCCTGGGGCCTCATTCATCATGGCATCAAGGTATGCATCAGTG GGATTCTTCCCTAGAGAAGCAAGCATATCATGCAAATCTTCCTTGTCGATGAAGCCATCTCT GTTCTGATCAATCATGTTGAAGGCCTCTTTGAACTCCTGAATCTGTGACTGGTCAAACATGG CAAACACATTGGATGTTGCACGCTGAGGGCGCTTCTTGGTGGTCTTTGGCCTTTTTG CTCGACATGGTGGTTGTTTAATTTCTGGCCAAGCACTGTTATGAAGGCATAGGGCTTCCTCA

AAGAGAAAGTCTCCAAAGTTGATTTCTTACTCTGACAAAGACTGTCCCCATTTAATCCTCACA ACAGTTGCCTATGGTAGGTACTCTTATTCCCATTTTACTACCAGTATAACATAACCTCTCTGA GCCTCAATCCTCTTATTCCCATTTTACTACCAGTATAACATAACCTCTCTGAGCCTCAATTTT CATCAGTAAAACATGATATCTACTTCAATGCAAAGAACTAATTGAGATAACATATGTAAAAAGA CTAGtcagttcAAAAAAGCgg

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caTttaacTTtttattaCTTTTTAAAAATCCAAATTCagaTAAATTaacacACTAGGTTAGAACCT CAATTGTATTIgatacagaAGGTATTGATGACTTTATTATTCTGCAGGTACATGTCCAGGGGCCC GCCACGCCCATCTTTATCACCAGAATGAGGAACTCCTGGAAGTTAACTGCACCATCAGTGTT GATATCCAACTCTTTGAACCAGACGTCTGCACCCTTTTTCCTGATATACTGAGGACACTCGGT CTCTAGCAATTTCTTCAGGTCATCCCTGTAGACGGCATGGAAATTCCCCTTTATCAGGGAGT ACTTGTGGTAGACGTCGATGATAGAGTTCAAGGCTTTCTCCAGCTCGGTCAACATGATGCCC ACGGACTTGCCCCACCATGTCTCTTGTCAGCTGTCTTTCAGAAGACCTGGTGGGGCAAGTC CGTGGGCATCATGTTGACCGAGCTGGAGAAAGCCTTGAACTCTATCATCGACGTCTACCACA AGTACTCCCTGATAAAGGGGAATTTCCATGCCGTCTACAGGGATGACCTGAAGAAATTGCTA GAGACCGAGTGTCCTCAGTATATCAGGAAAAAGGGTGCAGACGTCTGGTTCAAAGAGTTGG ATATCAACACTGATGGTGCAGTTAACTTCCAGGAGTTCCTCATTCTGGTGATAAAGATGGGC GTGGCAGCCCACAAAAAAAGCCATGAAGAAAGCCACAAAGAGTAGCTGAGTTACTGGGCCC cccagctgattttagactcgggcaagtttaggcatgcggcccgaaattggggctaacttgcccaattccgcctaatggggagcgtattcaa attaactgccgtggtttaacaagtcggaattgaaaaacccttgctgtacccaacttaatcgccttggagaaaatcccttttgccagttggcg taaata

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**ATAGGGAGTCGACCACGCGTCCGCGCTCTACATTGGGGCGGGATGTGGGAGCGGC** GAATCCGTAAAGACCCATTTCTCTATGAGGCTGATGTCCAAGTGCAGTTGATCAGCAAAGGC CAACCAAACCCTTTGAAAAATATTCTAAATGAAAATGACATAGTATTCATAGTGGAAAAAGTG CCTTTAGAAAAGGAAGAACAAGTCATATTGAAGAACTTCAATCTGAAGAAACTGCCATATCT GATTTCTCTACTGGCGAAAATGTTGGACCACTTGCTTTACCAGTTGGGAAGGCAAGGCAGTT **AATTGGACTTTACACCATGGCTCACAATCCTAATATGACCCATTTGAAGATTAATCTGCCAGT** TACTGCCCTTCCCCCTTTGGGTAAGATGTGACAGTTCAGATCCTGAAGGTACTTGTTGGC TAGGAGCTGAGCTTATCACAACAACAACAGCATTACAGGAATTGTCTTATATGTGGTCAGTT **GTAAAGCTGATAAAAATTATTCTGTAAATCTTGAAAAACCTAAAAAATTTACACAAGAAAAGACA** TCACTTGTCTACTGTAACATCCAAAGGCTTTGCCCAGTATGAGCTCTTTAAGTCCTCTGCCTT GGATGATACAATCACAGCATCACAAACTGCGATCGCTTTGGATATTTCCTGGAGTCCTGTGG **ATGAGATTCTTCAAATCCCTCCACTCTCTTCAACTGCAACTCTGAATATTAAAGTGGAATCAG** GAGAGCCCAGAGGTCCTTTGAATCATCTCTACAGAGAACTGAAATTTCTTCTTGTTTTGGCTG **ATGGTTTGAGGACTGGTGTCACTGAATGGCTCGAGCCCCTGGAAGCAAAATCTGCTGTTGA** AGACACTGAGGTTGAGACCTTGAAGCATGACACTGCTGCAGTCGATCGTTCCGTCAAGCGT CTTTTCAAAGTTCGGAGTGATCTTGATTTTGCTGAGCAACTGTGGTGCAAAATGAGCAGTAG TGTGATTTCATACCAAGACTTGGTGAAGTGTTTCACATTGATCATCCAGAGTCTACAACGTGG TTATCATGGAACCATGGACACAGTTTCTCTCAGTGGGACTATTCCAGTTCAAATGCTTTTGGA AATTGGTTTGGACAAACTAAAGAAAGATTATATCAGTTTTTTCATAGGTCAGGAACTTGCATC

ACGCGGGATTCCCCCATGTTTTCTTCTAGAAGTTTTACAGTTTTACGATCTACATTTT TGGTCTATGACCCATTTTGGTTAAATTTTGTGTAAGGGATGTTATACATGTGGAGGTTCATTT TTTTGCATGTAAATATCCAATTGTTTCAACACCATTGGTTGAAAAGACGGTATGTTCTCCTTTG AATGCTTCTGCGCCTCAATTAAAATCAGTTTACTCTATCTGCATAAGTCTACTTCTGGGCTGT CTACTCTCTTCATTGATCTGTATGTCTGTCCATTTTCCAATACCACTGTCTTTATTACTGTAG TGCACAATTAGTATGCTAAATCAGAGCAATCTTGTTGTTCAAATGGTTTATGGGAGAAATAT TAGCCAGTGTCTCACATGCTCATTGATGATAACTGTAGCTTATGTGAAATCATTGTTTCTCA GCCTTGCCAGCTATTTCAAAACCACTGCCTGTGCTCGGTAAGTGTTGCCTGTGTCATCATTA TTGTCTGGACCAAGGTGATCATAATTTGATATCTGAGAATGGTTTCTGCTGCATAGTAGATGG CAATGACAGGAAACATCCTGATCATTCGTCCTGAAGACTACTTTCTGTTACTGCTAAAATTTA ATAGTATTATCATCCTGCCTCCTAAATTTTTACATCAAAATAATTGTTAAGCACAGGACTTAGA AAATAATTTGAAAGGCGATGTCATTTAAAATAATTTTTAAAGTGATTTTGTAGATTCATAGCAC TACACTITATAAATACCTCATCTGAAGAAACCTTTGTGTTAGACGTTCCCAATAGCTGGGAAA **CTGCCCATGAAATGATCTCAGTTACAAACN** >1103

NNNATGTTGTTAAGATGTGTATAGTAAACAGAGTTGTGTCTAGTGCTTGTTTTCATGA ACTITIGGCAGATCITICTTAGTGACTITITATCTTCCTCGGGTGTGTCGGTGTGTTACCCCC ATTTGTGTATTTTTTTTGTAGAATGGACATGCCCGAACGATGTTTGCATTGAAAAGTGCACGG TTTTCCTTTTTTTTTGGCATGCAGCATATATAAAATGTGATCTAGAATTGAAATTGTAAAACA GAATAATCCTCTTAAAGAAAATCAGCCTATGAACAGTCAGACTTGTCCTTCCATGGAAAACAT **AATCTAAACTTCTTTAAAAACTGGCCATATTTTTTCAGTCTGTAATTCGAATAATGAAGATGGC** ATAACAAATTTTTTTGCTTACTAGGAATGCGCAAAAGGATGAGATGGATACACAGGTTTAAAA AAAAAAAAAAAAGGCCACTGGGATATTTAGTATTTGTCCAGATGCAAAACAATTTCAGAATAA TGAAAATTTCAGTCCACATTAAACATTTTAAAGCATAACTTCTAATATTTTGTTAAAAATAAGTC AAACTAAAGGCATAAATCAGAATTACCTGTTAACATAGTGGGGAAAGTAGGGAAGCCCTCCA GGGGCCCCGTGCCCCAAGTAAAAGACAAGGAGTTAAATTTTACAATGAAATCCACGTATACT CAGGCTCTTTACACTAATAATCAAAGTGGAGACCAACCAGTTCCTAAAGCATAAAAGAGTGAT TTTAAGAAAATATCACATTTTGAGTTACGGTATATTCATCACATTTTTCCCTGTAATTTTCACTT TAACAGTGATAGTCTTAGCAGCAAAAATTTGCTGGGAATGTTAGGAAAAAAGGAAGCCACAC ATACCTACTAATTTAAAAATATATAAACTATTTTTACAGAAGGGCAGGTTTAAAAGAAAATCC AATCATGATCTTTTCATGCCATTTTTTTGTCAACTTTCCATACACACGCAGACGCTAACAAAGTA CTGTGTCATATACACTGAAGTGTCCTGAAGATGCCTGTGAGCTGCTGATTCCAGCTGGTACC AGGGAAGCATGTGTGGCTAAGTTGCAACAAACTTAAATTTGTTCCCCTTAGTTCTTCATCTTT TTAAAAGCTGAATAAACTTAATGTCAATCGGGTGGGGCCGGTATTAACAGCATCAACCGCTT GCTTACTATGAATCATCCGCAACAGAAACCCACGTGCATTCTCCATTCTTAAAAAGTCAGTGT AAAACTAACGGCCACTTCCTCCCTAGGTGCCTACTATCGCTATGTCTGACAGCATCTGTAAC AGGACAAGCTCACCTCTCTACACGGATTCATCCAAAGCCACACACTAGGCCAAATTCTCC CAGTGGAATCAAAACACTGGAAGTAGAGCAAGAACCTCATGCCAACATTGGCCCAATCACAC CTCAGTGACTTAGGAGTTCATCATATTTGATCATAAAATTGCTCCCGGCGCCAAACCTTACAC CTAAAGACTGTAGTTTTAAAAAGCCACTGTACCGTCCACAATTATTCTGACCACTCTTTTCTAA

#### Table 4

ATGGAGAATGTGCTACGCACTGAAGATCAGAACACACGCGGGGAGCCCTTGGGCACTGAC CCTGAGCCTGTACACAAGATCAGCTGGTACTAGTCTCAAATGATTCATGAGGACTCAAAGTG GAAATTTAAACATTCAATTCTGTGTATCATTCATGTGCCCAGAGTCTTCAAAGAATGCTCGTG TTAGTTACCTGACACCTCTGGAGAAGTGACAGGGATATTCGTGTGAATAACCATGGCTCCCT TCCAGACAGACATATGGAATCTTACTCTTAAAAAAGTAAAGATATTTCAGATATCAAATGTATT ATAATATACTGCGGTCTAAAGTTAAAGGCAAAATTTACACACGATTTTCTCTTCCATGACTTTA TTACATGTTTCCTAGTGAATTCACACGGCTCGTGTGTCAAAGCTCCCAGGCACGTCACTTGG TCACAGTTTTCATGTGCGTGGGGTTGATCATGGTACAAATGCCTATGCGCATCTTTTTCTCG GATGGTCTCATTTGACTTTCATTTCGTAAGGGTTCACTCTCCATGGTGTAGATGATAAGCTAC CACATTTGTGCTTTTAAACCCATTCCTGGCAATCCCCCTTTATCTTCATTTTGTCTTTAGGGG GATAAAGAAGTAACACTACCTCATGAATAGAAACTATGAAGCCAAAAAACTCCTTCACAAGCT GTTCATTTCTTTTTAGAATGAAAATGCAGGTCCTGAATTCTCGTGAAGCAGCCCACAGGGTTA CAGGCCAATGATTCGAACGCTGAGGTGAACACTTAGTACTCGCATTTGAGCTTCAAAGTAAA AATAAAGCAGAGGACAAACGCCTGTCACAGCGTGGCAGCCCGGTTCATTTGGTAACAGAAC ACAGCCAGGCACCTGTTCAAAAGCCTCTCTGGTGGTGGCGGTGGACCCCAAAACCCACGG GTTGGAAGAGCCTTTGGGAAAGCAAATTGATACCCTGATTGCAGTCCTTGAAGAAATCACTT AGGGTTAGTTTAATAAACGAACATTAAAAAATCTTCCAAAAATTGCATTCAAATGTATTTTACA CTTTAGGCAGTTCTTAAGAAGGGAGAGTGCAGTTTCTTACACTAACATTAAAGGTTTANNNNN >1104

GCACATACCAAGCATTGTCTGTAACAGAATAATGTCATGGACACACATGCAGATAAA
TATACCTACTAAAATTCTTTGAATGTATGAAATGCTATTGTGGTTAATGAAATGCACATTCACT
TAAACAAGCGTTTTTTCAGTTCCTATAGGTTTTTTTTATTCATGTGTATCAGTCCTCCATCTGT
AGAAGCTAAAAATACAATAACTCTCTTATACTGGTACTTGCAATGGTTTGACATTAAGAGAGA
GACTATACATTCACAGAGGTTGGGAGCTTCTGTCTAGCCTGTTGTCCAAAACTGCTTATATAA
TTTAGCAACTAATTTTCACTTTTGACAACTATTTTAATTCTAGAGAATACGTTTATAAAGATTTT
CTTACAGTGTTATCTATCCTTCCAATGACTTATTATAAATTTTAGAATGTATTTCTATAGGGTG
GAAAAATCTCCTTTAGTCAGAAATTGAACAGTTTTCATGAAGAACATGTTACACCATGTAGAAA
CATGGGT
>1105

CCACGCGTCCGCTGACTGTCTCTCTCTGTCTTGTAATATTGCCACTGCGCATATGTT GAAGCAGAGGAGCCGCACGGCGAGGGGCCGCAGACCGTCTGGAAATGCGAAGCCTAAAG CGTTTCCTCGCTTGCATTCAGCTCCTCTGTGTTTGCCGCCTGGATTGGGCTAATGGATACTA CAGACAACAGAGAAAACTTGTTGAAGAGATTGGCTGGTCCTATACAGGAGCACTGAATCAAA **AAAATTGGGGAAAGAAATATCCAACATGTAATAGCCCAAAACAATCTCCTATCAATATTGATG** AAGATCTTACACAAGTAAATGTGAATCTTAAGAAACTTAAATTTCAGGGTTGGGATAAAACAT CATTGGAAAACACATTCATTCATAACACTGGGAAAACAGTGGAAATTAATCTCACTAATGACT **GGAAAATGCAATATGTCATCTGATGGATCAGAGCATAGTTTAGAAGGACAAAAATTTCCACTT** GAGATGCAAATCTACTGCTTTGATGCGGACCGATTTTCAAGTTTTGAGGAAGCAGTCAAAGG AAAAGGGAAGTTAAGAGCTTTATCCATTTTGTTTGAGGTTGGGACAGAAGAAAATTTGGATTT CAAAGCGATTATTGATGGAGTCGAAAGTGTTAGTCGTTTTGGGAAGCAGGCTGCTTTAGATC CATTCATACTGTTGAACCTTCTGCCAAACTCAACTGACAAGTATTACATTTACAATGGCTCATT GACATCTCCTCCCTGCACAGACACAGTTGACTGGATTGTTTTTAAAGATACAGTTAGCATCTC TGAAAGCCAGTTGGCTGTTTTTTGTGAAGTTCTTACAATGCAACAATCTGGTTATGTCATGCT GATGGACTACTTACAAAACAATTTTCGAGAGCAACAGTACAAGTTCTCTAGACAGGTGTTTTC CTCATACACTGGAAAGGAAGAGTTCATGAAGCAGTTTGTAGTTCAGAACCAGAAAATGTTC AGGCTGACCCAGAGAATTATACCAGCCTTCTTGTTACATGGGAAAGACCTCGAGTCGTTTAT **GCATGAATTTTTGACAGATGGCTATCAAGACTTGGGTGCTATTCTCAATAATTTGCTACCCAA** TATGAGTTATGTTCTTCAGATAGTAGCCATATGCACTAATGGCTTATATGGAAAATACAGCGA **AACTGAAGAATAATCAAGGAGGAGGAAGAGGGGAAAAGACATTGAAGAAGGCGCTATTGTG** AATCCTGGTAGAGACAGTGCTACAAACCAAATCAGGAAAAAGGAACCCCAGATTTCTACCAC

### Table 4

AACACACTACAATCGCATAGGGACGAAATACAATGAAGCCAAGACTAACCGATCCCCAACAA GAGGAAGTGAATTCTCTGGAAAGGGTGATGTTCCCAATACATCTTTAAATTCCACTTCCCAAC CAGTCACTAAATTAGCCACAGAAAAAGATATTTCCTTGACTTCTCAGACTGTGACTGAACTGC CACCTCACACTGTGGAAGGTACTTCAGCCTCTTTAAATGATGGCTCTAAAACTGTTCTTAGAT CTCCACATATGAACTTGTCGGGGACTGCAGAATCCTTAAATACAGTTTCTATAACAGAATATG AGGAGGAGAGTTTATTGACCAGTTTCAAGCTTGATACTGGAGCTGAAGATTCTTCAGGCTCC AGTCCCGCAACTTCTGCTATCCCATTCATCTCTGAGAACATATCCCAAGGGTATATATTTTCC TCCGAAAACCCAGAGACAATAACATATGATGTCCTTATACCAGAATCTGCTAGAAATGCTTCC GAAGATTCAACTTCATCAGGTTCAGAAGAATCACTAAAGGATCCTTCTATGGAGGGAAATGT TTTCTCCAGACTAATTACACTGAGATACGTGTTGATGAATCTGAGAAGACAACCAAGTCCTTT TCTGCAGGCCCAGTGATGTCACAGGGTCCCTCAGTTACAGATCTGGAAATGCCACATTATTC TACCTTTGCCTACTTCCCAACTGAGGTAACACCTCATGCTTTTACCCCATCCTCCAGACAACA GGATTTGGTCTCCACGGTCAACGTGGTATACTCGCAGACAACCCAACCGGTATACAATGGT GAGACACCTCTTCAACCTTCCTACAGTAGTGAAGTCTTTCCTCTAGTCACCCCTTTGTTGCTT GACAATCAGATCCTCAACACTACCCCTGCTGCTTCAAGTAGTGATTCGGCCTTGCATGCTAC TTTGCTTCCATTTTCCTCTGCTTCCTTCAGTAGTGAATTGTTTCGCCATCTGCATACAGTTTCT CAAATCCTTCCACAAGTTACTTCAGCTACCGAGAGTGATAAGGTGCCCTTGCATGCTTCTCT GCCAGTGGCTGGGGGTGATTTGCTATTAGAGCCCAGCCTTGCTCAGTATTCTGATGTGCTGT CCACTACTCATGCTGCTTCAGAGACGCTGGAATTTGGTAGTGAATCTGGTGTTCTTTATAAAA CGCTTATGTTTTCTCAAGTTGAACCACCCAGCAGTGATGCCATGATGCACGTTCTTCA GGGCCTGAACCTTCTTATGCCTTGTCTGATAATGAGGGCTCCCAACACATCTTCACTGTTTCT TACAGTTCTGCAATACCTGTGCATGATTCTGTGGGTGTAACTTATCAGGGTTCCTTATTTAGC GGCCCTAGCCATATACCAATACCTAAGTCTTCGTTAATAACCCCAACTGCATCATTACTGCAG CCTACTCATGCCCTCTCTGGTGATGGGGAATGGTCTGGAGCCTCTTCTGATAGTGAATTTCT TITACCTGACACAGATGGGCTGACAGCCCTTAACATTTCTTCACCTGTTTCTGTAGCTGAATT TACATATACAACATCTGTGTTTGGTGATGATAATAAGGCGCTTTCTAAAAGTGAAATAATATAT GGAAATGAGACTGAACTGCAAATTCCTTCTTTCAATGAGATGGTTTACCCTTCTGAAAGCACA GTCATGCCCAACATGTATGATAATGTAAATAAGTTGAATGCGTCTTTACAAGAAACCTCTGTT TCCATTTCTAGCACCAAGGGCATGTTTCCAGGGTCCCTTGCTCATACCACCACTAAGGTTTTT GATCATGAGATTAGTCAAGTTCCAGAAAATAACTTTTCAGTTCAACCTACACATACTGTCTCT CAAGCATCTGGTGACACTTCGCTTAAACCTGTGCTTAGTGCAAACTCAGAGCCAGCATCCTC TGACCCTGCTTCTAGTGAAATGTTATCTCCTTCAACTCAGCTCTTATTTTATGAGACCTCAGC TTCTTTTAGTACTGAAGTATTGCTACAACCTTCCTTTCAGGCTTCTGATGTTGACACCTTGCTT AAAACTGTTCTTCCAGCTGTGCCCAGTGATCCAATATTGGTTGAAACCCCCAAAGTTGATAAA ATTAGTTCTACAATGTTGCATCTCATTGTATCAAATTCTGCTTCAAGTGAAAACATGCTGCACT CTACATCTGTACCAGTTTTTGATGTGTCGCCTACTTCTCATATGCACTCTGCTTCACTTCAAG GTTTGACCATTTCCTATGCAAGTGAGAAATATGAACCAGTTTTGTTAAAAAGTGAAAGTTCCC ACCAAGTGGTACCTTCTTTGTACAGTAATGATGAGTTGTTCCAAACGGCCAATTTGGAGATTA ACCAGGCCCATCCCCCAAAAGGAAGGCATGTATTTGCTACACCTGTTTTATCAATTGATGAA CCATTAAATACACTAATAAATAAGCTTATACATTCCGATGAAATTTTAACCTCCACCAAAAGTT CTGTTACTGGTAAGGTATTTGCTGGTATTCCAACAGTTGCTTCTGATACATTTGTATCTACTG ATCATTCTGTTCCTATAGGAAATGGGCATGTTGCCATTACAGCTGTTTCTCCCCACAGAGATG GTTCTGTAACCTCAACAAAGTTGCTGTTTCCTTCTAAGGCAACTTCTGAGCTGAGTCATAGTG CCAAATCTGATGCCGGTTTAGTGGGTGGTGGTGAAGATGGTGACACTGATGATGATGGTGA TGATGATGACAGAGATAGTGATGGCTTATCCATTCATAAGTGTATGTCATGCTCATCCTA TAGAGAATCACAGGAAAAGGTAATGAATGATTCAGACACCCACGAAAACAGTCTTATGGATC AGAATAATCCAATCTCATACTCACTATCTGAGAATTCTGAAGAAGATAATAGAGTCACAAGTG TATCCTCAGACAGTCAAACTGGTATGGACAGAAGTCCTGGTAAATCACCATCAGCAAATGGG CTATCCCAAAAGCACAATGATGGAAAAGAGGAAAATGACATTCAGACTGGTAGTGCTCTGCT TCCTCTCAGCCCTGAATCTAAAGCATGGGCAGTTCTGACAAGTGATGAAGAAAGTGGATCAG GGCAAGGTACCTCAGATAGCCTTAATGAGAATGAGACTTCCACAGATTTCAGTTTTGCAGAC ACTAATGAAAAAGATGCTGATGGGATCCTGGCAGCAGGTGACTCAGAAATAACTCCTGGATT CCCACAGTCCCCAACATCATCTGTTACTAGCGAGAACTCAGAAGTGTTCCACGTTTCAGAGG CAGAGGCCAGTAATAGTAGCCATGAGTCTCGTATTGGTCTAGCTGAGGGGTTGGAATCCGA

### Table 4

GAAGAAGGCAGTTATACCCCTTGTGATCGTGTCAGCCCTGACTTTTATCTGTCTAGTGGTTC TTGTGGGTATTCTCATCTACTGGAGGAAATGCTTCCAGACTGCACACTTTTACTTAGAGGACA GTACATCCCCTAGAGTTATATCCACACCTCCAACACCTATCTTTCCAATTTCAGATGATGTCG GAGCAATTCCAATAAAGCACTTTCCAAAGCATGTTGCAGATTTACATGCAAGTAGTGGGTTTA CTGAAGAATTTGAGACACTGAAAGAGTTTTACCAGGAAGTGCAGAGCTGTACTGTTGACTTA GGTATTACAGCAGACAGCTCCAACCACCAGACAACAAGCACAAGAATCGATACATAAATAT CGTTGCCTATGATCATAGCAGGGTTAAGCTAGCACAGCTTGCTGAAAAAGGATGGCAAACTGA CTGATTATATCAATGCCAATTATGTTGATGGCTACAACAGACCAAAAGCTTATATTGCTGCCC AAGGCCCACTGAAATCCACAGCTGAAGATTTCTGGAGAATGATATGGGAACATAATGTGGAA TGCCGATGGGAGTGAGGAGTACGGGAACTTTCTGGTCACTCAGAAGAGTGTGCAAGTGCTT GCCTATTATACTGTGAGGAATTTTACTCTAAGAAACACAAAAATAAAAAAGGGCTCCCAGAAA GGAAGACCCAGTGGACGTGTGGTCACACAGTATCACTACACGCAGTGGCCTGACATGGGAG TACCAGAGTACTCCCTGCCAGTGCTGACCTTTGTGAGAAAGGCAGCCTATGCCAAGCGCCA TGCAGTGGGGCCTGTTGTCGTCCACTGCAGTGCTGGAGTTGGAAGAACAGGCACATATATT GTGCTAGACAGTATGTTGCAGCAGATTCAACACGAAGGAACTGTCAACATATTTGGCTTCTT TGATACACTGGTTGAGGCCATACTTAGTAAAGAAACTGAGGTGCTGGACAGTCATATTCATG CCTATGTTAATGCACTCCTCATTCCTGGACCAGCAGGCAAAACAAAGCTAGAGAAACAATTC CAGCTCCTGAGCCAGTCAAATATACAGCAGAGTGACTATTCTGCAGCCCTAAAGCAATGCAA CAGGGAAAAGAATCGAACTTCTTCTATCATCCCTGTGGAAAGATCAAGGGTTGGCATTTCAT CCCTGAGTGGAGAAGGCACAGACTACATCAATGCCTCCTATATCATGGGCTATTACCAGAGC AATGAATTCATCATTACCCAGCACCCTCTCCTTCATACCATCAAGGATTTCTGGAGGATGATA TGGGACCATAATGCCCAACTGGTGGTTATGATTCCTGATGGCCAAAACATGGCAGAAGATGA ATTTGTTTACTGGCCAAATAAAGATGAGCCTATAAATTGTGAGAGCTTTAAGGTCACTCTTAT GGCTGAAGAACACAAATGTCTATCTAATGAGGAAAAACTTATAATTCAGGACTTTATCTTAGA AGCTACACAGGATGATTATGTACTTGAAGTGAGGCACTTTCAGTGTCCTAAATGGCCAAATC CAGATAGCCCCATTAGTAAAACTTTTGAACTTATAAGTGTTATAAAAGAAGAAGAAGCTGCCAATA GGGATGGGCCTATGATTGTTCATGATGAGCATGGAGGAGTGACGCAGGAACTTTCTGTGC TCTGACAACCTTATGCACCAACTAGAAAAAGAAAATTCCGTGGATGTTTACCAGGTAGCCA AGATGATCAATCTGATGAGGCCAGGAGTCTTTGCTGACATTGAGCAGTATCAGTTTCTCTAC **GTAATGGTGCAGCATTGCCTGATGGAAATATAGCTGAGAGCTTAGAGTCTTTAGTTTAACAC** AGAAAGGGGTGGGGGAACTCACATCTGAGCATTGTTTTCCTCTTCCTAAAATTAGGCAGGAA **AATCAGTCTAGTTCTGTTGATTTCCCATCACCTGACAGTAACTTTCATGACATAGG** ATTCTGCCGCCAAATTTATATCATTAACAATGTGTGCCTTTTTGCAAGACTTGTAATTTACTTA TTATGTTTGAACTAAAATGATTGAATTTTACAGTATTTCTAAGAATGGAATTGTGGTATTTTTTT CTGTATTGATTTTAACAGAAAATTTCAATTTATAGAGGTTAGGAATTCCAAACTACAGAAAATG TTTGTTTTTAGTGTCAAATTTTTAGCTGTATTTGTAGCAATTATCAGGTTTGCTAGAAATATAA CTTTTAATACAGTAGCCTGTAAATAAAACACTCTTCCATATGATATTCAACATTTTACAACTGC AGTATTCACCTAAAGTAGAAATAATCTGTTACTTATTGTAAATACTGCCCTAGTGTCTCCATG GACCAAATTTATATTTATAATTGTAGATTTTTATATTTTACTACTGAGTCAAGTTTTCTAGTTCT GTGTAATTGTTTAGTTTAATGACGTAGTTCATTAGCTGGTCTTACTCTACCAGTTTTCTGACAT TGTATTGTGTTACCTAAGTCATTAACTTTGTTTCAGCATGTAATTTTAACTTTTGTGGAAAATA GAAATACCTTCATTTTGAAAGAAGTTTTTATGAGAATAACACCTTACCAAACATTGTTCAAATG GTCGTTTTACAACGTCGTGACTGGGCCCTGGCGTTACCCAACTTAATCGCCTTGCAGCACAT CCCCTTTCGCCAGCTGGCGTAATAGCGAAGAGGCCCGCACCGATCGCCCTTCCCAACAGT **TGCGCAGCCTGATGGCGNN** 

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GCTCAGACTGGGAACAGGGCCCAGGAATCTGTGTGGTACAAACCTGCATGGTGTTTATGCA CACAGAGATTTGAGAACCATTGTTCTGAATGCTGCTTCCATTTGACAAAGTGCCGTGATAATT AGAAAAATGCAATCAGGATTTTAAACATGTAAATACAAATTTTGTATAACTTTTGATGACTTCA GTGAAATTTTCAGGTAGTCTGAGTAATAGATTGTTTTGCCACTTAGAATAGCATTGGCACTTA GTTTTGGAGGCAAAGTGGGGATTATTGTCAGGTTGTCCTGTTCTATAAAATTTAAGGTCAGGT TGGCCCTTTTTGGGAAAGTTGCCTTTAAGATTGTGGCATGGTTCACGGGTTTGCTTAAATTTG TGGTATAAAATTCTAAAAAAGGGGATTGGGGTCATAGGGGGAAAGGGGAAGAGAGGTAAATG N

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NGTCTGTGAGATGTTACCACTAGTATTTGGAAAAAGAATAAAAATGTGGCCGGGCGT GGTGACACATGCCTGTAATCTAGCCACTTGGGAGGCCAAGGCAGGAGAATCGCTTGAACCT GGGAGGCGGAGGTTGCAGTGAGCCAAGATTGCAGCATTGCACTCCAGCCTGGGCAACAGA ATTGTCACTTACTGAGAAGCAAGAACAATGAGTGAGCCCAAAGGAGTCTACTACCATACCTA TTAAGTGTAGGGAAGGGTTTAAGTATTTTTTACATACTTTTCTTCTTCTTCATTGGAAAAACACCA CCCATCTGAAATGGACAGAAGAAAATTTTCCCAGGTGTTCTACTCTCATCAGAACAGCTTGG TGCCAGTGACCTCCACACTGTTAGCTGGCTCCCATACTGCTTGAAGGGCACCAGTCAAGAG CTGTCAAAGGGAGTCTCCTCAGAAATCAGCATTTGTGGGAGATCCCACTTCCAAAAAGGTAG TGCAGCAGTGCTGTTTCCGAGCAGCAGTGAATGTGGGGGCTGAAGACGACGCTTTACAGGG CCTTGCTTAGGCCCTGGGGATGGGAGTAAACAGAGTCATGATATGAGGATGTAGTGAAATG **AGTTTCTGCANN** 

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NACGAAATTTAATACGACTCACTATAGGGAATTTGGCCCTCGAGGCCAAGAATTCGG CACGAGACAAAAATTAGCTGGGCATAGTGGCGGGTACCTATAATCCCAGCTACTCGGGAGG CTGAGGCACGAGAATCACTTGAAGCCGGGAGGTGGGGGGTTGCAGTGAGCCGAGATCACAC CACTGCACTCCAGCCTGGGCAACAAGAGCAAAACTCCGTCTCAAAAAAAGATGAAAATAAAAT AAAATATATATTTACAGGCCTACAACTTTTGCCTCAGACTGTTCCCCTTTTCTAAGGGTATTCA AGTTTTCACCTTTTAAGCTTCATATCCTCAGTGCTTGTAGAATGATGAGCTTAGAGGTACCAG GTCATTGCAGTTGTTTGCTTAAAGACTTATTGAAATGGTTACTGGCGTAAATACTTGGCCAAC TCAACTTTATTGCCCCTGATCTTTTCCATTTTTGTTTCCACCTTAACCTATAGCAGCTCCTCCA AATGAGGAATGCTGTAAGTAAGACTCATCAAACAGATTTTAACCATTTTATTATCCTGTGTGT CCTTACATTGCTTCTGTGAGATGTTTTTTTCTTATCTGAGATGAACTTTCAGGAGCCTATTTGA **ACTCCAGACTGGTGTTCTGGGGCAAAGAGCTATTAGCCAAACTGATTCTATGCAGGTGAAGG** GCTTAATTTGGAATAGAGAAACCAGTATATTTTAAAAAAGAAAAATATTCTTTGTAGCAACTGT **AAATTCTCCCATTATAACAGTGAACAGAGCTCCAGGTAATAACGCATAGGCATGTCAGGTTG** CATCTGTATATTTGACTACATTAGTATTAGTGACATCAGGTGGATATAAAAGAAAACCCTTGG **AAAGAGAACTGCCTTAGCCATGATTTCGTTAGTAGACCTATTTATGATTCAATTGCAATTTTCA** GATAGGATGTGAACATGGAATTTCATTGAAAATAGTTTAATTTTTTATATAAAAGGTTTTGTAT ATAATGTGTGTCAGTGACTATTTTCAAAATCATTTTCATCAAGACACCTTTTTTCTAAAATAGG CATTGCATACACATATGCÁCACGTATGTGCACGTGCCACACATTTTTTGTATAATGTTGGGTT TGATTATAAAAGTGTTGTCAAATGTTTTATTTATCTGCATATAGCAGTGGTTGGCTTTTTTGAA **ATTTTTGCATATTTCTGTAATATTGCAGTCCCCAGATCCAGAACATGGGAAGTTAGGGAAAAT** AGACATTTCATTGTACTGCAAAAATCTGAATATTTATATTTCTTGTTTTTTCTTTATATGTTTT GCATTTTAATATGTTGAGCCACTGGAAATTTGTAACAGATTAATTTGTTATAGGAGTTTAAATG TGTTGTCATTGTCTCCATTGTCTTTGTCCAGAGCCTATTATTATGGAAACAATAAAATTTATTG **ACTAGGATAGGTCATAGGGAGGCGGAAGGACCAAACAACGCGACGCCAGTCAAGACATGG** 

#### Table 4

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NNNNNNNNNNNNNGAGACAGAGTCTCACCCTGTCGCCCAGGCTGTAGTGCAGTG **GTGCCATCTCAGCTCACTGCAAGCTCCGCCCACTGGGTTCACGCCATTCTCCTGCCTCAGC** CTCTCGAGTAGCTGGGAATACAGGCACCCACCACTATGCCCGGCCAATTTTTTCTATATTTA GTAGAGACGGGGTTTCACCGTGGTAGCCAGGATGGTCTTGATCTCCTGACCTCGTGATCCA CCCACCTTGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACCCTGCCGGGCTGAAAA **ATAACCCTTTAGATATCTACAGCTTTAAACTGTGTGCAGTCATGAAAAGCAGACATTGGGAAG** TCATTGGCATTTAATAAATTGCAGAAAAATTATACAGTAAATACATTACAATCATTAATAATAA GCTCTAATGAGAAGAATTTAATAAATAATCATTAAAAAAGACAGCAGAATTTTATCTGTTCTCAA **TATGTTGCTGCTCTTCTTATCAAATACTATAAAAACTATATGACTATAATAATAATATCAGG AGCTAAAAAAAGCCTTATATTTTCAAATAAAAGAACAATATAAATTTTGCAAAAATATGACGAGC ATTACTGCAGTATAAAGTAAATATCTGGAATTAAAATATACCATCATTTAGATATAGACTAAAA AAAAAGAATATAAATGTTAATGATTCCTTTCTGCCTGCAGTGAGCTTAAAATTACAACCAAAAA** TTTTAATAAATATGTAGCACCTACAAGACATTTTATTAATAGCTTACATAATGTGGAAATTTGA **ACATAAAGCGGAATTCCGACGACCACCACCACCTCGCGCTGGACCCCTGCCTCAGTGA** CGAGAACTATGACTTTAGCTCCGCCGAGTCGGGCTCCTCGCTGCGCTACTACAGCGAGGGT GAGAGCGGCGGCGGCGGCAGCTCCTTGTCGCTGCATCCGCCGCAGCAGCCTCCGCT GGTCCCGACGAACTCGGGGGGGCGCGCGCGACAGGAGGGTCCCCCGGGGAAAGGAAAC GTACCCGGCTTGGCGGCCCGGCGCCCGGCACCGCTATGAGGTAGTGACGGAGCTGGGC CCGGAGGAGGTACGCTGGTTCTACAAGGAGGACAAGAAGACCTGGAAGCCCTTCATCGGCT **ACGACTCGCTCCGCATCGAGCTCGCCTTCCGGACCCTGCTGCAGACCACGGGTGCCCGGC** CCCAGGGCGGGACCGGCGACCATGTGTGCTCCCCCACGGCCCAGCCTCCAGT TCCGGAGAAGATGACGATGAGGACCGCCCTGCGGCTTCTGCCAGAGTACGACGGGGCAC GAGGTGGATGTGACCCAAGGAGAGTGCTACCCGGTGTACTGGAACCAGGCTGATAAAATAC CAGTAATGCGTGGACAGTGGTTTATTGACGGCACTTGGCAGCCTCTAGAAGAAGAAAAG TAATTTAATTGAGCAAGAACATCTCAATTGTTTTAGGGGCCAGCAGATGCAGGAAAATTTCGA TATTGAAGTGTCAAAATCCATAGATGGAAAAGATGCTGTTCATAGTTTCAAGTTGAGTCGAAA

CCATGTGGACTGGCACAGTGTGGATGAAGTATATCTTTATAGTGATGCAACAACATCTAAAAT TGCAAGAACAGTTACCCAAAAACTGGGATTTTCTAAAGCATCAAGTAGTGGTACCAGACTTC ATAGAGGTTATGTAGAAGAAGCCACATTAGAAGACAAGCCATCACAGACTACCCATATTGTA TTTGTTGTGCATGGCATTGGGCAGAAAATGGACCAAGGAAGAATTATCAAAAATACAGCTAT GATGAGAGAAGCTGCAAGAAAAATAGAAGAAAGGCATTTTTCCAACCATGCAACACATGTTG AATTTCTGCCTGTTGAGTGGCGGTCAAAACTTACTCTTGATGGAGACACTGTTGATTCCATTA CTCCTGACAAAGTACGAGGTTTAAGGGATATGCTGAACAGCAGTGCAATGGACATAATGTAT TATACTAGTCCACTTTATAGAGATGAACTAGTTAAAGGCCTTCAGCAAGAGCTGAATCGATTG TATTCCCTTTTCTGTTCTCGGAATCCAGACTTTGAAGAAAAAGGGGGTAAAGTCTCAATAGTA ACGACATCTTCTTGATGAACTCTATATAACAAAACGACGGCTGAAGGAAATAGAAGAACGGC TTCACGGATTGAAAGCATCATCTATGACACAAACACCTGCCTTAAAATTTAAGGTTGAGAATT TCTTCTGTATGGGATCCCCATTAGCAGTTTTCTTGGCGTTGCGTGGCATCCGCCCAGGAAAT ACTGGAAGTCAAGACCATATTTTGCCTAGAGAGATTTGTAACCGGTTACTAAATATTTTTCAT CCTACAGATCCAGTGGCTTATAGATTAGAACCATTAATACTGAAACACTACAGCAACATTTCA CCTGTCCAGATCCACTGGTACAATACTTCAAATCCTTTACCTTATGAACATATGAAGCCAAGC TTTCTCAACCCAGCTAAAGAACCTACCTCAGTTTCAGAGAATGAAGGCATTTCAACCATACCA AGCCCTGTGACCTCACCAGTTTTGTCCCGCCGACACTATGGAGAATCTATAACAAATATAGG CAAAGCAAGCATATTAGGGGCTGCTAGCATTGGAAAGGGACTTGGAGGAATGTTGTTCTCAA GATTTGGACGTTCATCTACAACACAGTCATCTGAAACATCAAAAGACTCAATGGAAGATGAG AAGAAGCCAGTTGCCTCACCTTCTGCTACCACCGTAGGGACACAGACCCTTCCACATAGCA GGCCTTGTGGAGAGCCGCTATTGGTCAGCTGTCACGTCGCATACTGCCTATTGGTCATCCTT GGATGTTGCCCTTTTTCTTTTAACCTTCATGTATAAACATGAGCACGATGATGATGCAAAACC CGTTAAAATGTGTGTCAAGATACGGAGATTTCAGGGTTAAAGTATATTTCAGTTTTCTTTA AAAAAAAAAAAGGAAGGCCGCTAGACTAGTCTAGAGAAAAAACCTCCCNCACCTCCCCAA **AACCTGAAACATAGNAATGAATAAAGANN** 

NNNNCGGTTTTCCGGGCAGGTACGCGGGGGCGCCCGTTCCAGAGGGCGCGC TTATCTAACACGTGGAATGAAAAGTACAGTTCTTTACAGAAAACACCTGTTTGGAAAGGCAG GAATACAAGCTCTGCTGTGGAAATGCCTTTCAGAAATTCAAAACGAAGTCGACTTTTTTCTGA TGAAGATGATAGGCAAATAAATACAAGGTCACCTAAAAGAAACCAGAGGGTTGCAATGGTTC CACAGAAATTTACAGCAACAATGTCAACACCAGATAAGAAAGCTTCACAGAAGATTGGTTTTC GATTACGTAATCTGCTCAAGCTTCCTAAAGCACATAAATGGTGTATATACGAGTGGTTCTATT CAAATATAGATAAACCACTTTTTGAAGGTGATAATGACTTCTGTGTATGTCTAAAGGAATCTTT TCCTAATTTGAAAACAAGAAAGTTAACAAGAGTAGAATGGGGAAAAATTCGGCGGCTTATGG GAAAACCACGGAGATGTTCTTCTGCATTTTTTGAGGAAGAGAGATCAGCATTAAAACAGAAA CGGCAGAAAATAAGGCTCTTACAACAAAGGAAAGTTGCAGATGTTTCACAATTCAAAGATCT CCCAGATGAAATTCCTTTGCCTCTGGTTATTGGAACGAAAGTTACAGCACGATTACGTGGTG TTCATGATGGTTTGTTCACTGGACAAATAGATGCTGTGGATACTCTTAATGCTACTTATAGAG TAACTTTTGATAGGACAGGGCTTGGAACCCATACCATCCCTGACTATGAAGTTCTCAGTAAT GAACCTCATGAGACAATGCCAATTGCTGCCTTGGGACAAAAACAGCGGCCTTCTCGATTTTT TATGACCCCACCACGGTTACATTATACTCCTCCTCTCCAGTCACCAATTATAGATÁATGATCC TITATTAGGACAGTCGCCGTGGAGAAGTAAAATTTCTGGCTCTGACACTGAAACATTAGGTG GTTTTCCAGTAGAATTTCTTATCCAAGTGACCAGATTATCAAAAATTCTCATGATTCACCAAG GAACATATCAAGAACATCAGGGACATGAACACAGAAGCAGAAACACTGGCAATCATATTGCA TGCCAGTCAGCATTGGATTCACGCGGAGATTTGCGACAATCGGTCTCGGGGACTTGAACAG GTGAACACAGGGCCTAAACACAGTTTGGGTAACGGTCACCGGATTGCTATGAGATTGTCCC AACACGGGGGTCCAGCTGAGAGATCAGCGAAGGTATTAACCCGTGTGTAGCGGCGAAACAC CCGGCACAGTGTCCGCGCGACATCCTCAGCGGAGAACCCGTCTTTACAGGGGCACTGGGC GACAGCAATTCAGATCGCGACTGGTGACCAATTGTGCCAGCGGACGCCCCTGAGCAACCAA

#### Table 4

CTCAGAGTAACGAAACATGATCACGAGCACTAACAAACGATAAGTGAAGCGAACGGCCCACGGCTGCAACGACTGCTTCCTCATCATACATCTTTCATTATGAN
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ggaagaggacataagcagctctatgaccaatagcacagctgccagtagacccccggtcaccctgaggctggtggtccctg ctagtcagtgtggctctctcattggaaaaggTGGATGCAAGATCAAGGAAATACGAGAGAGAGTACAGGGGCTGCATTCCACATCCATCATTGAGTGTGTCAAACAGATCTGCGTGGTCATGTTGGAGTCCCCC CCGAAGGGCGTGACCATCCCGTACCGGCCCAAGCCGTCCAGCTCTCCGGTCATCTTTGCAG GTGGTCAGGACAGGTACAGCACAGGCAGCGACAGTGctgAGCTTTCCCCACACCACCCCGTC CATGTGCCTCAACCCTGACCTGGAGGGACCACCTCTAGAGTTGACCAAGCTGCACCAGTTG GCAATGCAACAGTCTCATTTTCCCATGACGCATGGCAACACCGGATTCAGTGGCATTGAATC CAGCTCTCCAGAGGTGAAAGGCTATTGGGCAGGTTTGGATGCATCTGCTCAGACTACTTCTC ATGAACTCACCATTCCAAACGATTTGATTGGCTGCATAATCGGGCGTCAAGGCGCCAAAATC AATGAGATCCGTCAGATGTCTGGGGCGCAGATCAAAATTGCGAACCCAGTGGAAGGATCTA CTGATAGGCAGGTTACCATCACTGGATCTGCTGCCAGCATTAGCCTGGCTCAATATCTAATC **AATGTCAGGCTTTCCTCGGAGACGGGTGGCATGGGGAGCAGCTAGAACAATGCAGATTCAT** CCATAATCCCTTTCTGCTGTTCACCACCACCATGATCCATCTGTAGTTTCTGAACAGTCA GCGATTCCAGGTTTTAAATAGTTTGTAAATTTTCAGTTTCTACACACTTTATCATCCACTCGTG ATTTTTTAATTAAAGCGTTTTAATTCCTTTCTCTGTTCAGCTGTTGATGCTGAGATCCATATTTA CTGTTTGTCATGGAAATGTAAGAGTGGAATATTAATACATTTCAGTTTAGTTCTGTAATGTCAG GAATTTTTCAAAAAATTAAAAGATGGACTGGAGCTTTTTCTTTGTGAATAGAAACTGGATGC CACAGTGATTCATGTGGGTTTTATTCCTCTTGTCTTGCTGTTATTTTTGTACCTTTTATCCCTC AAAGGACCCTTCTTGGGTTTTGAATGGAAGCCTTTATTCCGGTTAAGATGTTTTCTTCTATTTT CCTTATAAAACTTGTGCCCAAAAGATTGAGGATTAGACTTTCCGAGGACTTACCTGTCCTAG CATGGCATACACATTAAGCAGTTGATCATATGTCTGACTGGGTTCCAGTTTCTTGGGAATGTT GGTCCCCTTGTTCAGGCTTGCATATTTTAAACTAAAAATTTCAGTCTATTGTTTTTAGTAACTT CATTTATAGTCCTCCATAACAAGTTAGAAGGATGTATCTGCTACCATTTATTCCTATAATTTTA GAAAGTTGGGGCTTGACATTATACTCATTTAGTGAGAGTAGATGCAAAAAAGTGGAGGGGCA **GGAGAACTTCTCCAGACACCTCAGATAAAGTCCGGAGCCCAAGGCTTTATCTTAACCATGTA TGGT** 

#### Table 4

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cgtccgcccaCGCGtccgggCGGAACCCCGTCAGGAAAGCGCACAAAACTGCTCTTAAGT CATTGCAGAGCTACCGCTTCGGTTAGCCAGCCACGAAGTTCTCGCGAGAGTCGTCTCCTCG ATACCAAAGCTGGTGTGAGACGAGACAATCCTGCCCCGCcqCGGGATAATCAaagtTTGGCCG AAACGGATTAATAAGTTGCAGCTTTTCACCCGAAGCTATTTATCCGAGGGACACCGGGAACT GATGTAAAAGGCATTCTGGAAGCTCCCTTTTCCTTTTGGCTGGAGAGTGGGGGTGGATAAG GGGTGCGATGGCAGTAAGGGAAAGCTAATGTACCTATTTTTGCCTCATTCTATTTAATAACAC GGATTTTTCGGAGCTCTGGGAGTGAGCGGAACCTCCACCTCCGGTGGTTTAGTCTCATTTTC TTGCTCTAACTTCTATCCCGCATTTTAAGATGGCGGCTGCTTTAACTGGTTCAGGCTCTTTCC GGCATCTCCTTTCGTAATAATGTGAATTAATATGATTTGTTAAATGTTAACTTTTATATCGCGT TGTGCACTGCTCTAAGATCCTCTGCTCAAAACTTACCTAAATTCAAACTCTTAAACTGTATTTC CCTTTTTTGTGACTTGTATTTGTGTGATGTGTTTGGTTGCACAATCGAAGAGGGTGGAGT GTTTACAGCTAACTTGAAAAAAATGTCATGGAATAAATTCAGCCTTACTAGAAAAATTGTGGA GTGTCGGAACTTAGTGATTTGGCCCGTGACCCTCCAGCACAATGTTCTGCAGGTCCAGTTG GGGATGATATGTTTCATTGGCAAGCCACAATTATGGGACCTAATGACAGCCCATATcaaagCG GTGTATTCTTTTTGACAATTCATTTTCCTACAGACTACCCCTTCAAACCACCTAAGGTTGCATT TACAACAAGAATTTATCATCCAAATATTAACAGTAATGGCAGCATTTGTCTCGATATTCTAAGA TCACAGTGGTCGCCTGCTTTAACAATTTCTAAAGTTCTTTTATCCATTTGTTCACTGCTATGTG AAGTACAACAAGAATTTATCATCCAAATATTAACAGTAATGGCAGCATTTGTCTCGATATTCTA AGATCACAGTGGTCGCCTGCTTTAACAATTTCTAAAGTTCTTTTATCCATTTGTTCACTGCTAT GATAAGTACAACAGAATATCTCGGGAATGGACTCAGAAGTATGCCATGTGATGCTACCTTAA AGTCAGAATAACCTGCATTATAGCTGGAATAAACTTTAAATTACTGTTCCTTTTTTGATTTTCT TTCATTCACATGCTCATCTGAGAAGACTTAAGTTCTTCCAGCTTTGGACAATAACTGCTTTTA TGGAGCATGTGTATTATGTGGCCAATGTCTTCACTCTAACTTGGTTATGAGACTAAAACCATT TCACATCAAAGGATACAGCATTATTCTAGCAGCATCCATTCTTGTTTAAGCCTTCCACTGTTA GAGATTTGAGGTTACATGATATGCTTTATGCTCATAACTGATGTGGCTGGAGAATTGGTATTG **AATTTATAGCATCAGCAGAACAGAAAATGTGATGTATTTTATGCATGTCAATAAAGGAATGAC** CTGTTCTTGTTCTACAGAGAATGGAAATTGGAAGTCAAACACCCTTTGTATTCCAAAATAGGG TCTCAAACATTTTGTAATTTTCATTTAAATTGTTAGGAGGCTTGGAGCTATTAGTTAATCTATC TTCCAATACACTGTTTAATATAGCACTGAATAAATGATGCAAGTTGTCAATGGATGAGTGATC **AACTAATAGCTCTGCTAGTAATTGATTTATTTTTCTTCAATAAAGTTGCATAAACCAATGAGTT** AGCTGCCTGGATTAATCAGTATGGGAAACAATCTTTTGTAAATGCAAAGCTGTTTTTTGTATA TACTGTTGGGATTTGCTTCATTGTTTGACATCAAATGATGATGTAAAGTTCGAAAGAGTGAAT ATTTTGCCATGTTCAGTTAAAGTGCACAGTCTGTTACAGGTTGACACATTGCTTGACCTGATT TATGCAGAATTAATAAGCTATTTGGATAGTGTAGCTTTAATGTGCTGCACATGATACTGGCAG CCCTAGAGTTCATAGATGGACTTTTGGGACCCAGCAGTTTTGAAATGTGTTTATGGAGTTTAA GAAATTTATTTTCCAGGTGCAGCCCCTGTCTAACTGAAATTTCTCTTCACCTTGTACACTTGA CAGCTGAAAAAAACAACATGGGAGTAATAATGGGTCAAAATTTGCAAAATAAAGTACTGTTT TGGTGTGGGAGTTGTCATGAGGCTGTTGAAGTGACTTATCTATGTGGGATATTGAGTATC CATTGAAATGGATTTGTTCAGCCATTTACATTAATGAGCATTTAAATGCAACAGATATCATTTC TATCTGTGCCACTGATTTAACTTCTGTAGTAACAAGGGCATTACCATTCTTCACCTTTCCTAAT TCTGATCCCATAGTTTTACATTTTTCCTGTTTATTTTGATTTTGTTCACTGCTTTATTTCTTAAA GTTCTAGCACATCTGTGACTCCTCCACTTCCACATTTTTGCACTGCACTTACACTTACGTGCAAT **AACATTTTAATATGTAGTTTGGACATGATTTATTGACTTAAGGTTCTTCTCTAAACTGGAAGTG** AAATGCATGCCTTCTGAAGATGTTCTGGCTTTGTTAATTCTGTAATCATTTCATTGGGGAAAA AACCAGCTACGCAGTTTTTCCAATGAGTGAATTTTTTCATTTTGTGTTTTTGCTTAAAACGGCTC 

#### Table 4

**ACATTCTGCTCCACAGGTAAGAAAAACTGCTCTTTGGCTCTATTTTCAAAAATTACTTCTGAG** ATGCATATAGTCTCAAAATAACAGCTTTAGTAGGCATATCACTTCTTGAAAGCCAAACATGAG TGTAAGACACTTTTATGAAACACGGTGGATCCCTAACTGGCTTTCAAATTGACCTTTATAGCC TTAGACACCCTTAGGTATTTACGGAGATGACTTCTTTGATTGTCATAACAATTAGTGGATGT GTCCAGTTCTCTGTATCTTTGACTTGATGCTTTATACATCATTTCATTTGTTGCTTCTAAGGGA ATAAGCCATAGAGGCTTCTCCAGGTTTAAAAGAACAGTAAAGTACCTGGAAAACCAACATTTT TGAATGTATGGACACTGGACATGAGATATGTACAATGAAATCTTAAAAGAATCTAAGAATTTG CCCTCTTTGCCCCACTCCACCCAGTAATTTGACATTACTAGTGCCATGTATAGGACCCAACT GAGTATTAGAATCAGTTTTGACTATGTCTTTGTATTTCCTAAATCTTTTAATGCATAAACCGAA GGCGAGTTTGCAATGTGATAATCAGATTTTTTAAAACTGATTAATTTGCTTTCTTGTGTGGGT GTACTCACATTTTAAAGTATGAACCACAGTTAACTAGTGGTCTCAGGGGTAGTGAAACACTCA CTTTTTTTTGTTTGTTTTTTTTGTTTGTTTGTTTGAAATGGCTTAGTTGAAGTATACTTAAGG TGGCATAACAAAACTGTTAATGATTGTTGATTACACTTTTAAGTGAATTTGTCTTTTATGAGGA **ACCCAGTGCAAGTCACTAAATATTGTCTAATAGTGACATCTGCATAAGACTTGTAATAGCTGA** AGTTAATTGAGCTTAAAGGAATTGTTACCATTAAAGTCTGTG >1127

GCGTCCGGAATGGTAAGTATATACCTCTTATAAAATCTTCGAATGGCTTCCTCTTTCT TGGACTGAAAAATGTCCATTTTCCTACCACCTGCAACATTACTCTTCTCTTGCTTACTCTAGTA CTGCAAACATGGATTCTTTATTGTTCTTTAAACAGACAAGCTCCTGGCTCAGGGCCTTTGCTT TCTTGGTTCCTGTTTTTCCCACATACCTACATGGATCCATCTTTGTCTTTCACCTCCTTTTCA TTTCTGCACAATTGAGTTTTCAATCAGAACTTTCCGACAGCCCGTTTTAACATTGTAAATTCTT TCCATCCCTGGCCTTTTCAATTCCTCCATGCTCTGATTTTCTCCATCGCGCATTTTATCATCT GATATACCAAATATTTTACTTATTTTCTCTACTTTGCTCATGCATTACAATGACATCTCCATGG AGGAAGATGTTTTTGGATTTTTTTTTTAACTGCTGTTATCCTCAGTGCTCAATAGTAGGTACG ACCTTACAGCCATTAGTCCTATAATAATTTAATTTGGGTTTGTGGGTATAGAAACTGTATTTGC ACAATAATGATAAAGCCACTCAGGCTCATCTAGTCATTTCCTGAATTTATGTGTGTAGGAGTA CCACAGAGCACAAAAGATGGGCACCCCCAGCTGCAGCCGACTGTCAGAGGTGCAGGCCTC CCTGCATGGATAGTCCTGGGCCAGCCACCCCCGAGTTCCACCCTATCAACTCCCTGGAG **ACTTTTTGGTCACATGCACTGCGCCCAGGTGATGCTCTGTATATTTGAGGAAAGACACCCTA** ACCCAGTAAATGCAGAAAGCTCTTAGGACAGACAGAAAACCTGCCATGGGGCTGCTTCCCT **AACGAAAGTAGAATGTAAAACTCGCAGCAGATATCAGTGGGAAGGGCTGGGGGAGGGGG** ACCCAGCTGCCTTTCCTCCCTCACAGGAGCCACCACCACCACCTCTCAGGAGAAGCCAGA GGCCCTGGCCAAAGATAGGAGGAAGAAGAGAACTCTCCATAGAATGTAATTTATAGATGCG **CTTTTTAAACTCNNNN** 

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GTATTAGATAAATGGAATTATGATATATGATATACAAACTTTTTTCTATTTAAAAATATATTA ATGGATCAACTTTAAAATTGTTAGTTGCCAGTGATCTTTTTTGGAAAACAAAAATGGGGCATT TGCTTTTCCTCTACTTCTACTTCCTCCCCCACCTTTTTCTGCCCAGTGTAGGTGTATTCTTA AATTCAGACGGGAAGATTCTTTCACATATCACTCAGTTACCTCCCAATCTGGGGGAGTTTTTC TTACAACTTGATACCAGATACCATTAATTTTACATTCCTGAATAAAGGCCTAGTACCCACGCA TTAGGTTTCCATGGGCACTGGTTCTCATAGGTTCTATTGGTGATAACTGCTTTAACATGGAGC AAGAGTTTGTGAATCAGGAAATAGAATAAATTAAAATTTAAAATATATAGAGGAATCCTCTTGA TTGCTCAGCATGATGTTAGATAAATGAGTTTGTCAGAAAATATCAGTATACGCTGTTTACCAA TGTTATTTACATTCTTCTAAAGCCATTATGGATATTGTATTATGAGAGCTAAACCTAAATA AGTTATCCTGTTCCCTAGGACCTTCTCTGTAAATAGTGAATTTTAGACGAGTAGTCTGTCCTA AATCTTAAATAGAAAAAAAACTAAAGCGATTTGCTTAAGCCATTGTACATTATAAAGAGCTGTT TTGTTTTGCTTTGCTTTGTTTTGTTTTTTAAAGCTGCATTCAGAGCCACAAAGGAATA NNNNNNNNNNNNNNNNNNNNNNN

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TCTAAAACATGCTAACCTGACCTTTTCCTTCTAATTTGTTTTTAACTTCATTCGAGATA GTACCTCTCACTCACAGATATTTATTTGGTTATCAAGTGAAGATAGGTGTGTCTAAAAGTGAT CTTCTGAATCCTGTCTCCCTAGAGGTACTAGTATCTAGAGTTTACCCAGAAAATTTTATGATT GTAACAAAAGGAAGTAGTGACTTATGAAGGTTTTGTTTCTTGAATTTTACTTTTGCTACTTGTC CAATAGTGGCTAGTTTACATTTATGGGAAATTTTATAGTTTGCATAAACAAAGTATAAACTTAA GGCACAGTGAATAACTATATTGATAAACATAAACTAGCCACTATTGGACAAGTAGCAAAAGTA AAATTCAAGAAACAAAACCTTCATAAGTCACTACTTCCTTTTGTTACAATCATAAAATTTTCTG **GGTAAACTCTAGATACTAGTACCTCTAGGGAGACAGGATTCAGAAGATCACTTTTAGACACA** AAAAACAAATTAGAAGGAAAAGGTCAGGTTAGCATGTTTTAGAACTATTGGTAAACTATAATT CATGGGACATTATATAATCAAAAGATTAATATTTTAAGCACTAAGTTATAAAGGGTTTACACCC ATGAATAAAAAGATTACCATCACTTACTATGAACCACCATTCCATGAATCCATGTAGCTGAAC ACTCCTAATGAAAAGTTTAATTATCCTTCAACCTGTAGTTGAAGAACTCAGTTCATGTTCATTG ATATTAAAATTGAAAACTTAATGCTGTTTAGAAGGCTATTAATATAACTATTAATTTCTGAAAG CTTTGAGTTTCTGAAAAGGCTTTTAAGATCAAAATTTCTGAAACACTCCACACATTCTTCCTCA CCCACATTTAATTATAAATCAATGTTATACTGATAAAAGGTTCTATACACACATTTAGAGATAT TCTCACTCTGTCGCCCAGGCTGGAGTGCAGTGGTGCAATCTTGGCTCACTGCAACCTCCAC CTCCCTGGTTCAAGTGATTCTCCTGGGAGGCAGAGGTCGCAGTGAGCCGAGATCATGCCAC **TATATTCAN** 

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#### Table 4

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TGTGAGACTTAACCTGTTTTTTCTATGGGCAAATGACCTGAACTCCTGAATCAGTTTCCCCAT CTGTAAAGTGAGGATGAAAATAGTATCTACTTTATTGAGATTTTTCTTATTCATCTGTAGCATC TTTGTGTAATGTCATATGGATGTAACTTGGTTGGTACTATTAGCAACTGTGATGATGATGATT GTGAATCTTATTTTCATATCTTGGGTTTTCTTACAGTGAAATATTTGTTGCTGTTATTTTCTTTG TAAAAATAAACCATGTTTGCATCTTGGTCTTCCATTTGGATTCAAAAGTTTTATAGTGAT TCCTCCTAGTAAAATTGCATTTTCTCCCTAGGAGTACTTCTTTGATTCCAGAGTATTAACAGAT GGAGAACTGGCTCCCAATGATAGATGTTCCCGTGTGTGGGAAAAATAGGCCACTACATGAA AGACTGCACCTAACAAGGAAAAGGTTGGCAAATGAATATATCAACATTTGAGGAAAATAAA TGAGAGGCCAATTTGTAGCTATAATTATGTTCAGAAATGTTTAACTGAGAAAGTTTAGGGTAT TTAATTATACCTAAGGTAAATGTTCATTTGAGTGGAATTTTGTAATAGGGTAAGATTTGCATGT TTTTGTTTTTGTTTTTATTTTTGTTTTTTTGAGACGGCATCTCGCCCTGTCGCCCAGGCTGG AGTGCAATGGTGTGATCTCGGCTCACTGCATCCTCCGCCTCCCAGTTTCAAGTGATTCTCCT GCCTCAGCCTCCAAGTAGCTGGGATTACAGGCGCACACCACAATGCCCAGCTAAATTTTTG TATCTTTAGTAGAGATGGAGTTTCACCAACATTGGCCAGGCTGGTCTCGAACGCCN

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NNNCCCTTTTTTTCCCCCCTTTGGTCCCAGGTGGGTTCCCCCAAAAACCCCCCC TTNTNGGCTATGTAATACTGTCTAATAATTGAGACTTTTAGAATCTAGAGATGATCAGAGTGA TCTTTTGGGCTGGGAATTCATCAGGAACTGGGTCTGTAGGAACCTATTCTCGGGCTTCCCAT GGCCTTTGATCTCCTGTTACGGTCCCTCCACAAACATAACATGAGGCGACTTGTAGAGACTG GGCTACGTGTTCGGCTAATTGCAAAAACAAATTTTTAGTTTTTCCTGGAATCTCAGGTACTGG CACATTTAGTTCATCATAGAAAGTCTGAAATACTGGTTCTGGAGAGCGTTTTTGAACCTCTCC TTTTATTAGGATGCTTACACTAGGATCTAGTCCTTTTCCATCAATGCCTAATGATACATATTTT CCTTTATTACATTTGGGTCTGAGGGGTTTGTGATTATCAATTCTAAAAGGTTGCAGCTCCCAC TCGTGCAGGAGGGCTGACTTTTCCTTTTTGGAGCCAAACAGGATCTTTTTTATCTTCTGTTC AAGTAGCCCAAATGACACAAGACCAGTATTGACACATCTCACATAAATATGATTCTTGACAGA TATACTTATTTTTTTCTGTGTAACTTTTTTTCCAATTTAGAGAACCGCATCCTATCCATGCTG CTTACTATCAATAGTGGCACAAGCGTCAAATTTTAAGGTTACATTTTTGGGACCCCTTTTTCTT CTGTTCTAGCTATTACTTTACTTGTGTCACCTAGAAAAGGACCAGTCCTTAGTCCTACTTCAA **AGACTGTGATCATGGGAGGTTCAAAGGGGTCATAGCACACATCGGGCTGGTCACTTCCTGG ATTACATACTTTATACTGAGTGTTATTATACAAACAGGTTCCTTTTGGAGTTCCTAGGCATTCA** TAATAACTATAAAATAATAGGACTGTAGCAATCTTTTGTCCTACCTCAGTGACTTGATGTATAT ACTGGAAACAGTCTCAGTCTGAGGAAGGTCAGTTGAAGTCCTTACTGTACAAGTCCAAATTT TAAGGAAAATGAGTCCCGCGATGAGTTTCCTCATGCTTCAGCTGTGCGTGGACCAGTCAGCT TCCGGGTGTGACTGGAGCAGGGCTTGTCGTCTTCTTCAGAGTCACTTTGCAGGGGTTGGTG AAGCTGCTCCCATCCACATACAGCTCGCAGTCTACTGATGTTTAAGGTTGGTCTCGGAGGTT

GGGCCTACTAGGGTAGACTGAGTCTAACACCTCTACACAGTTTATGTTCAACTGGGCTCTCT
GATACCAGGAGTAAGGTGTGCAGGGTTAGGGTGTCGCAAACTTCAGTGGTTATGCGGGAAT
TTTCACAGAGCAAGCTTTGGTATCTAGTTAGTCTAGCATTCGTTAGCTAGGATGCGCTTTGGT
ATTTATTAAAATCATCACAGCATGGGGAGACTTTAGGTTTTGCCCAAGAGTTAGCTTATCTGC
TTCTTATGCTAACAGGGCCATTGCTGCCAGGGCCCTTAGACATGGGGGCCAGCCTTTGGAA
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AGGTAGCCCCAGGGCTGGGGCCGACATGAGTTTTTCTTTTTAACTCATGAAAAAGCTCGTTGC
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GGAGTCGACCCACGCGTCCGCGGACGCGTCGTTTCTGCTGACTCCAGTGTCCCGA GAGGCGCCGCTTCTCCGCTTTCTCGTCAGGCTCCTGCGCCCCAGGCATGAACCAAGGTTT CTGAACTACTGGGCGGGGGCCAACGTCTCTTCTTTCTCCCGCTCTGGCGGAGGCTTTGTCG CTGCGGGCTGGGCCCAGGGTGTCCCCCATGGCGGGGCCGCGGGTGGAGGTCGATGGCA GCATCATGGAAGGGGGGGCCAGATCCTGAGAGTCTCTACGGCCTTGAGCTGTCTCCTAGG CCTCCCCTTGCGGGTGCAGAAGATCCGAGCCGGCCGGAGCACGCCAGGCCTGAGGCCTCA **ACATTTATCTGGACTGGAAATGATTCGAGATTTGTGTGATGGGCAACTGGAGGGGGCAGAAA** TTGGCTCAACAGAAATAACCTTTACACCAGAGAAGATCAAAGGTGGAATCCACACAGCAGAT ACCAAGACAGCAGGAGTGTGTGCCTCTTGATGCAGGTCTCAATGCCGTGTGTTCTCTTTGC TGCTTCTCCATCAGAACTTCATTTGAAAGGTGGAACTAATGCTGAAATGGCACCACAGATCG ATTATACAGTGATGGTCTTCAAGCCAATTGTTGAAAAATTTGGTTTCATATTTAATTGTGACAT TAAAACAAGGGGATATTACCCAAAAGGGGGTGGTGAAGTGATTGTTCGAATGTCACCAGTTA AACAATTGAACCCTATAAATTTAACTGAGCGTGGCTGTGTGACTAAGATATATGGAAGAGCTT TCGTTGCTGGTGTTTTGCCATTTAAAGTAGCAAAAGATATGGCAGCGGCAGCAGTTAGATGC **ATCAGAAAGGAGATCCGGGATTTGTATGTTAACATCCAGCCTGTTCAAGAACCTAAAGACCA** TGGATCATCGCTTGGTAAACGAGGTGTAAATGCAGACAAAGTTGGAATTGAAGCTGCCGAAA TGCTATTAGCAAATCTTAGACATGGTGGTACTGTGGATGAGTATCTGCAAGACCAGCTGATT **GTTTTCATGGCATTAGCCAATGGAGTTTCCAGAATAAAAACAGGACCAGTTACACTCCATAC** GCAAACCGCGATACATTTTGCTGAACAAATAGCAAAGGCTAAATTTATTGTGAAGAAATCAGA AGATGAAGAAGACGCCGCTAAAGATACTTATATTATTGAATGCCAAGGAATTGGGATGACAA **ATCCAAATCTATAGAGTATTTGCCTCTTAAATGATACCTCATTGATATATTGCACTATTTCATA** AATACTATAAAATAATGACTAGGAAGTAACTTATTAAAGGCTATGACTTAAATTTGAAGATGAA GTACAGTGTTCTAGGTTTGCTGAGAAGGCTTCATTAAATTAATCTCACTTTGAATATCTCCTG AGAGATGGACAATGAAATATCAGTTGGTGGATATGTGTGATAGCTGATTTCAATATTGAAGTA **GTTTAGAGAAAGAACCTTCCACANN** 

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NNNAGATCCCAGAGGCTGAACACCTCGACCTTCTCTGCACAGCAGATGATCCCTGA GCAGCTGAAGACCAGAAAAGCCACTATCCGGAGGCTGAACACCTCGACCTTCTCTGCACAG CAGGTCCAGCATCCTTTGAAGCATGAGTTCTTACCAGCAGAAGCAGACCTTTACCCCACCAC CCCACAACCAAGGAGCCATGCCACTCAAAGGTTCCACAACCTGGAAACACAAAGATTCCAG AGCCAGGCTGTACCAAGGTCCCTGAGCCAGGCTGTACCAAGGTCCCTGAGCCAGGCTGTA CCAAGGTCCCTGAGCCAGGTTGTACCAAGGTCCCTGAGCCAGGCTGTACCAAGGTCCCTGA GCCAGGTTGTACCAAGGTCCCTGAGCCAGGCTACACCAAGGTCCCTGAACCAGGCAGCATC AAGGTCCCTGACCAAGGCTCATCAAGTTTCCTGAGCCAGGTGCCATCAAAGTTCCTGAGCA AGGATACACCAAAGTTCCTGTGCCAGGCTACACAAAGCTACCAGAGCCATGTCCTTCAACG GTCACTCCAGGCCCAGCTCAGCAGAAGACCAAGCAGAAGTAATTTGGTGCACAGACAAGCC CTTGAGAAGCCAACCACCAGATGCTGGACACCCTCTTCCCATCTGTTTCTGTGTCTTAATTGT CTGTAGACCTTGTAATCAGTACATTCTCACCCCAAGCCATAGTCTCTCTTATTTGTATCCT AAAAATACGTACTATAAAGCTTTTGTTCACACACACTCTGAAGAATCCTGTAAGCCCCTGAAT TAAGCAGAAAGTCTTCATGGCTTTTCTGGTCTTCGGCTGCTCAGGGTTCATCTGAAGATTCG 

## Table 4

AAGTCGACGCGCGCGAATTTAGTAGTATCACATTTGGCCCAAACCTCAGGATTCTCCCTCTGCCTGTCTTACTTCATGGT

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acGCGTCCGCCTGTAGCAGATTGGGTTTcaaaaagttcGGATGTAAACATTGACATCCAG TTTCCAGCCATTATGTCTCAGCCAGATGTCCTCTTACTTGTTCAAGAATGTTTAAAGAACAGT GACTCCTTTATTGATGTTGATGCAGACTTCCATGCTAGGGTGCCAGTGGTGGTGCAGAGA AAAGCAAAGTGGTCTTCTGTGTAAAGTGAGCGCAGGAAATGAAAATGCTTGTCTGACAACAA AGCATTTAACTGCCCTTGGAAAACTAGAACCAAAGCTGGTTCCTTTGGTGATTGCATTTAGGT ACTGGGCAAAGCTTTGCAGTATAGATCGCCCTGAAGAAGGAGGTCTGCCACCTTATGTGTTT GCCCTGATGGCCATTTTCTTCTTCAGCAGAGGAAAGAACCCCTTTTGCCTGTATATCTAGG ATCATGGATTGAAGGATTCTCATTAAGCAAACTAGGGAATTTCAACCTTCAAGACATTGAAAA AGATGTTGTGATCTGGGAACATACTGACAGTGCTGCAGGGGACACAGGCATAACAAAAGAA GAGGCACCAAGAGAAACGCCGATTAAAAGGGGACAGGTGTCATTAATATTGGATGTGAAAC ACCAGCCTTCAGTACCAGTTGGGCAGCTCTGGGTGGAATTGCTGCGGTTCTATGCTTTAGAA TTTAATTTGGCTGATTTAGTGATAAGTATTCGTGTCAAAGAATTGGTATCTCGGGAATTGAAG GATTGGCCCAAAAAGCGCATTGCCATTGAAGATCCCTACTCTGTTAAAAGAAATGTGGCAAG AACCCTAAATAGTCAACCTGTGTTTGAATATATACTTCATTGTTTAAGGACAACATACAAGTAT TTTGCTCTTCCACACAAAATTACAAAATCCAGCCTTCTAAAGCCTCTGAATGCAATTACATGT CTCAAAAACTCAGTTTTGGCCCAAGGTCCTGGTGCTACCAGTTCAGCTGCAAATACCTGTAA GGTACAGCCACTTACTCTTAAAGAGACTGCTGAAAGTTTTGGAAGCCCACCAAAAGAAGAAA TGGGAAATGAACACATCAGTGTCCACCCTGAAAACTCAGACTGTATCCAAGCAGATGTTAAC GAAAGTTGGAAGGAAGGCAAGCATCTGTTGACTGTTGATCAGAAACGTGGAGAGCATGTT GTCTGTGGCAGCACACGTAATAATGAGTCAGAGAGCACTTTGGATTTAGAAGGCTTCCAAAA TCCCACAGCTAAAGAGTGTGAGGGACTTGCCACTTTAGATAACAAGGCTGATCTTGATGGAG AAAGTACAGAAGGTACTGAGGAACTAGAAGACTCTCTAAACCACTTTACCCACTCAGTACAG GGCCAGACATCAGAAATGATTCCCTCTGATGAAGAGGAGGAGGACGACGAAGAAGAGGAG GAGGAAGAAGAACCTAGGCTCACCATTAACCAAAGGGAAGATGAAGATGGCATGGCTAATG AAGATGAGTTAGACAACACCTACACTGGGTCAGGGGATGAGGACGCCCTATCTGAAGAGGA TGATGAGTTAGGCGAAGCTGCTAAGTATGAAGACGTGAAAGAATGTGGAAAACATGTAGAAA CACCTGTGGATCAGTCTGATTTTTTTTATGAATTCAGTAAACTTATCTTCACCAAAGGCAAGT CTCCTACGGTAGTGTGCAGCTTATGCAAACGAGAGGGTCATCTAAAGAAGGACTGTCCTGAA GACTTCAAAAGAATCCAGCTAGAACCTCTGCCACCATTAACACCCAAGTTTTTAAATATCTTA GATCAAGTCTGTATCCAGTGTTATAAGGATTTTTCTCCAACAATTATAGAAGATCAGGCTCGT GAACATATTCGGCAAAACCTAGAAAGTTTCATAAGACAGGACTTTCCAGGAACTAAATTGAG CCTGTTTGGCTCCCAAAAATGGATTTGGGTTCAAACAGAGTGACCTTGACGTCTGTATGA CAATTAATGGACTTGAAACTGCTGAGGGATTGGACTGTGTCAGAACTATTGAAGAATTAGCA AGAGTCCTCAGAAAACATTCAGGTCTGAGAAACATCTTACCTATTACAACAGCAAAGGTGCC AATTGTGAAGTTCTTCCATTTGAGAAGTGGTCTGGAAGTAGATATCAGTTTGTATAACACATT

#### Table 4

GGCCCTTCATAACACAAGGCTTTTATCTGCTTATTCCGCCATTGATCCCAGAGTGAAGTATTT **GTGCTATACCATGAAAGTATTTACAAAGATGTGTGATATTGGTGATGCATCTAGAGGCAGCTT** ATCATCGTATGCATATACTCTTATGGTGCTATATTTTCTCCAGCAGAGGAATCCACCAGTCAT TCCTGTCCTTCAAGAGATATACAAAGGTGAAAAGAAACCTGAAATATTTGTTGATGGCTGGAA TATTTATTTTTTTGATCAAATAGATGAACTGCCTACCTATTGGTCAGAATGTGGAAAAAATACA GAATCTGTTGGGCAGTTATGGTTGGGCCTTCTTCGTTTCTACACAGAGGAATTTGATTTTAAA GAACATGTTATTAGCATCAGGAGAAAAAGTCTGCTTACAACTTTTAAGAAACAGTGGACCTCA AAATACATTGTTATTGAAGATCCCTTTGATTTGAATCATAATCTTGGAGCTGGATTATCAAGGA AAATGACAAATTTTATAATGAAGGCTTTTATCAATGGTAGAAGAGTATTTGGTATTCCTGTCAA GGGATTTCCAAAGGACTACCCCTCAAAAATGGAATACTTTTTTGATCCAGATGTGTTAACTGA AGGAGAGCTGGCCCCAAATGATAGATGTTGTCGAATTTGTGGAAAAATCGGACACTTCATGA AGGACTGTCCTATGAGGAGAAAAGTAAGACGGCGGCGAGATCAGGAAGATGCCCTGAACCA AAGATACCCTGAGAACAAGGAAAAAAGAAGCAAAGAGGACAAAGAAATTCACAACAAGTACA CAGAAAGGGAGGTGTCAACAAAAGAAGATAAGCCCATACAGTGCACACCTCAGAAAGCCAA GCCAATGCGGGCAGCTGCTGACCTGGGGAGGGAGAAGATCCTCAGGCCACCAGTAGAAAA ATGGAAGAGACAGGATGACAAAGACTTAAGAGAAAAACGTTGTTTTATTTGTGGAAGAAAAG GGCACATTAAAAAGGAATGCCCACAGTTTAAAGGCTCTTCAGGTAGCCTTTCCAGTAAATATA CAGCACTCTAAATGGCCACTCAGGCGTTCCTATTCACTCGGAAAATTAGGTTCATTTCACAG GACACAGCAGTGTAGATCAGGCTTCAACTTAACATTTAAGGGAAATGTCAGATTTTTTTAA TTTAATGAAATTGTTAATGAGGAAAAATTTTTAATATAGTCTTATCTACCACACATCCCCATAG **ATTTAAGGATTTTAATAGAAAGTCATGATGTATGTATTTAAGCCACGTTAAAAGAAAAAAATATA ACTATGGACCGGTATTCAGTGAATACAGTTTCATGGTTTTTAATTCTTTCAAAGCACATTAAAA** ATGGTGTGCTGATAAACCCCAAGTAAATTAACCCTTTTTCCGTATAAATCCATTTTTTGTTTTG AAGAGGGGAAATTATATTTATTGTTGTTTACTGAATCCTGGTGTGAAAGCATATCAGATATGT ATGAACTGCTACTGCTACTTCCGATTTACGGACATCATTTTATTGCTATTTGTAGACGTGA TAACATGAACATGAGTACCTATTTATGTGGGCCTTCAGTGGATGGCCAGTGCCACTCAGGTC TCTGGGGTTTCCCTCTCTAATTTTAAGTAAATTGACATATAACTACTATGCTTATAAAAATGAA GTAAGGAAAACAAGTAGTCCTGTTTGCCACTAAAAACATTTTCAAAGGAAAAAATAAAATGAAA GTACTTTTTACTTTTATGATACTCAGAAATTAGGATGAAGAACTTTTAAAATTGCTGAAGATC **AAAGAGGTTATCTCTGCCAGTCACAAGTGTGGCTGGTGTCATTCTGGGTCTGACTGGAGCC** CTCCTGGACTGTTTCTTTAATTTCAAAAGCCCTGCAGACATAGTACCTGGTCAGAACTATGCC 

GCGTCCGAAAAAAAAAGTCCTAAAAATGGAAAGCCTTCGAATGGTTTATAAACAAG GCAGTGCCTTGATCTGATTTGTGTTATAAAAATTTCAGTCTGGCTGCAATGTGGATAATAGTT TGGAATGGGGAAGAGATGTTGGGAAGCTAACTCTCCTAGCAAGAATGATAGAATAGCTT ACAGTAGGGTAGTGGCAGTAGTGGAGGAGATGGAATAATGGAGATTCAGGGGCTTGAATTT **GTTAACCATTTAGTTCAACAATATTTATTGATTGGCTTCTCTGTTGTGAGCATATCTCGGAGA GGAAGAAAACAAGCCAGGATAATCCCCAGGTTTCTGGTGTATAAATGTTGGTACTACTCTG** CGATGGAATGGAAAAAGACTTGAGGCCCTGAGAACTGAACCATGATTAGGAGCCTTGGAAC **AGTAGCAGTTGTCATCTGTGTAAATAAGGTTATTGATTTCTAAAAGGTCTATGTTTAATCAGAT GGATTAGTCATTCTGTCTTTCACACCTGTGGTGACTAATTCAAAGGAAAAGCCCTATCATTTT** GCCAGCTGGTGTTTAAGAGTTGCTTTGTTTTCTGTGAAACCAGGTGTACTGCATTAGAAAAGT TTATTCAACTTTTAATCATTAAGCATTGTGATAAATTGTAAACTTAGAAATTGTTTGGTTTACTG TATTAAAAATGTTGGATTCCTGTAATTCCAGCATTTTGGGAGGCTGAGGTGGGAGGATTGCT TGAGTTCAAGAGTTCAAGACCAGTCTGGGCAACATGGTAGGACCCCATCTCTACAAAAAGGA AAAAACAATTTGGCCTGGGAGTGCACGCTTGTGGTCCCAGCTACCCAGGAAGTTAAGGTGG GAGGTTTACTTGAGCCCAGAAGGTTGAGGCTGTGATGAGCCATGATCGTTTCATTGCACTCT **AGCCTGGGCAACAGAGTGAGACCCTGTCNNNNNN** 

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GTGGCGCCCCGGGCAGGTACGCGGGGGGGGGGGCTCCGAAGTCTGGTTTTGG GCGGGAATTGAAACCGCCGCTGAAGCCAACAAGAATTTGAGAACTGTAAATACCAAGCCTTG AAAGGGACCATGGTGCGGCCTGTGAGACATAAGAAACCAGTCAATTACTCACAGTTTGACCA CTCTGACAGTGATGATGTTTTCTGCAACTGTACCTTTAAACAAGAAATCCAGAACAGC

ACCAAAGGAGTTAAAACAAGATAAACCAAAACCTAACTTGAACAATCTCCGGAAAGAAGAAGAAT CCCAGTACAAGAGAAAACCCCTAAAAAAAGGATGGCTTTAGATGACAAGCTCTACCAGAGAG ACTTAGAAGTTGCACTAGCTTTATCAGTGAAGGAACTTCCAACAGTCACCACTAATGTGCAG AACTCTCAAGATAAAAGCATTGAAAAACATGGCAGTAGTAAAATAGAAACAATGAATAAGTCT CCTCATATCTCTAATTGCAGTGTAGCCAGTGATTATTTAGATTTGGATAAGATTACTGTGGAA GATGATGTTGGTGGTGTTCAAGGGAAAAGAAAGCAGCATCTAAAGCTGCAGCACAGCAGA GGAAGATTCTTCTGGAAGGCAGTGATGGTGATAGTGCTAATGACACTGAACCAGACTTTGCA CCTGGTGAAGATTCTGAGGATGATTCTGATTTTTGTGAGAGTGAGGATAATGACGAAGACTT AGAAAAGAAAGAAGAAATCTAAATCCAAATGTAATGCTTTGGTGACTTCGGTGGACTCTG CTCCAGCTGCCGTCAAATCAGAATCTCAGTCCTTGCCAAAAAAGGTTTCTCTGTCTTCAGATA CCACTAGGAAACCATTAGAAATACGCAGTCCTTCAGCTGAAAGCAAGAAACCTAAATGGGTC CCACCAGCGGCATCTGGAGGTAGCAGAAGTAGCAGCCGACCGGTGGTAGTGTCTGTG AAGTCTCCCAATCAGAGTCTCCGCCTTGGCTTGTCCAGATTAGCACGAGTTAAACCTTTGCA CTTTACAAGGGTGTTTATATTTGATTTGTGTTTATATTTGAGGCAGGTATTGTAATATAAAGGA ATCCATTACCATGTCCTATAAATGACCTCTAGCCATTTTATGATTATGTTCTCTGTAAAACTCT TCAAGACTTCAATGAGAAGTTTGTTTATAAGAATTATCTTCTCATACCTTTCCTTGTGAAGAGC GTATTCTGTTTTCTATCAGTTCGACATGAAGTCCACATCACATGCTGTTCTTTTCTAGTTACA TGATGTGCCTTTCTAGCTTTGTCTAGTTTATAGCACCTTAACTTTAACTGTTCAGTTTTATCTG GCAGAGGAAAACATTCTTATTTCTTTCAGAAGACATTTCTGAAATCTTATAAGCTACTTAAGCT ACGTTGTCAGTTTTATCGCAAAGATGTTTTGTATTTTAGCCAAATCTTTTTATAGTACAAACTT AGAATTATTTTACACACTAAAATGGTTGCAGTTTTATGGCATATGTCTCCGATTTAGATGGTTA TTCTCTAGAAAATAGTATTTAAAGACATTTTATGAAATCTTCATTGTCAAAACCTTTAATAAAAG TGGAAATATTTGAAATGCCCTTTTTCTTGATACCACTCATCCACGTGTTCCTGATTTGTCCAC ATTTCATGATAAAATGAGAGCTCTGCAGAGAATGTTAGCCTTTCTGTGTAAATGTAATCTTCA AGTAGTCACTTTTGTTAAGTTCTTTAGAAAGTAGTTGTCAAGTACTTAGTCATCCCTATTATGA TATGAGATAGTACAGTTTTCAGGAAGCTTAGATCTGAATTATTGTGAAAAACAATGGTATGAA TATTTTATATTTACATGAGAATTAATAGTTCTGATCAATTTTATAAAAAATTTTCAATTCATGTAG GTGTTAAAATGTTATAACTCAGTTTCTGGTTATGACTATCTTTTTAGGGAACTATATTAGAATG GGTAGTGGCTTGTTAAAAAAAAAAAAAAAAAAAAAATTGGGCGCGGCCGAAATTAAACGTGGGG GCCGAGAAAGGACGCGGAACGCATCAGGGTCACAAAGCGGCGCGGAACAGGGGGTCGT **TAGCAGCAGCCN** 

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gaGCTctagAATCATATTTATTTGATTTGCATTACCATTATTGATGACATTTTCACATTTA AAAACTACATAAĞATTTTATAATAAATGCAACCACTCTTACCTGCTTAAGCAAATATAAACAAA CACTCCCAGGCCTATTGTTTTTAAGGCTGTATATTTCACTTGATGGAAAAAGTGATGAACAGC **AATGACTTCCCAAGAAAAAAGAAAGAAAGTGGGTGTTACATATTCCTGAAAGCCAGACTCT** AATCACACAGAGGAATTTTATTGTAAGTTACATGCAAAGCAAATTAGTTCTTCAGGAAAATAA ATAAATAAATGGATCAACTAAGATATACTAAACCTCAAAAAACCCTGAATAAAGATAAAGGTA AAAATGTATTAATAAAAAAAACCCTTAAAATACTTAAGAAAGTATTAAAAATACAAAACGTTAAC TGAGAAAGTCAAAAAATAATTGCTTTATTTCTCTGTTTCATTAGTACTAATTCACAGGATCTTT GTAGGTTTTATCTGAAAGAAGGATATAAAAACTTAAAAGTCAGAGCAGGGAAAGGGGAGTAA TAAATTATTAAGAACAAACTCAGTGAGACTTGACTTCACTTATGATACATGGGTAGAAAGAGC AAACCAGCCTTCTTTCTGTTTCTCAATCTTTGCTCTTGGATTAAGAGGTGTGAATCTCCC ACTTCCTGAGGTGGCATTTAGTGGAGAACAAGAATTACCAGTAGCCCCGGAAGATCTTCTTG TATTTATCCCGCTGACGGGAGAGACAGTACTACATTTTGAGCTTTCTGGGGCTTCTGCTCCT GGAATAGATACCTCAATTGTCCTCTTTGCTCCTTCAGTCCATGCTCTGAGAGGTAACTGAACA GGTGACATTGGTccacgagcctccatactttgtcgattcaattctgcctcgtgccgaattcggcacgagATTCTGCTTTTG TAAAAGCAGTAGTTTĞAĞATGGACATTĞCCTCTTCATTĞTATTTCTCATCAATTCATTATTTT GTGGTTATAGCTTGACAAGCAATTAACTTTAAAATGGTAGATTCCGTAACTTTAAATTGGTAG CTTTCATTTGCTTAAAATTTTTTGGCATATGCAGATAATGTTCTCATCAGTAGTAAGAATCTCA

### Table 4

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NCTGCAGAATTCGCCCTTGAGCGGCCGCCCGGGCAGGTACTTAGGCTTTCATAAAA ATACAGCAGGGCAAGAGGACCAAGATGGAGGCAGTGATCAGGGAATCTCAATGAGGGTGA GACTGCGACAAAGACTTGAAAAAGGTGGAGAAGCAAGCCTTGTGGGTATTTAGGGTAGCAG TAGTCCAGGCAAGGGGAACAACTAGTGCAAAGGCTCTAGGAGGCAATGTGTTTGAAGTGTT TTAAGAACAGTAAGGAGGCTAGTATGGTTAGAACAGAATGAGCAAAGGGGGCAAAGTGGTA GAAGGTGAGATCAAAGAGGTAATGAGGCCATTGTGGAGGCCCATATGGACTATTGGAAGGG CTTTGGCTTTTACTCTAAATGAGGCAAAAACCATTTTAAGCAGAGAGGAGTGATATGACTTGA TTTCTTGTTAAAAGGATTATTCTAGTTGCTGTTACAGAAAAAGATTACAGGGGTGCAAAGAAA ATATGCTGGTTAATTATGATTAGGAGCACTAATAAAGCACAAAATCAGGGATTCCCAAAAAGAA TGTTAAAAGGCCAGTCAGCTTTTCCTGTGCCAGAAATCAAAGTCATAGCAGATTTGGGGCAA ATATGTCAAAGTCAAACTTACGCACATCACTACTGAGAAGACAAAGATGAATGTGTGACAGTT TCCTGCCCCAAGAATCTTTAAGCATTGTGAAGGAAGATTAATATAGCCAAATAACTAGAGTG AAAATGATGTTTGAATTAAATCTTTAAAAGTTTCTCTTATAAATTTACCAAGCCACATATTGGG **AATGGTACCCCAGGCAGAAGGAGTAGAGTAAGCAAGCCAGAAAGGAAATACTATGGTGCTT** TTGAGTAACTGCAGTGTGGCTGAAGAATGTGGAAAATGATGAGGATAAAGAGGTGGACAGG GAACTAGGTAAGGGAGGGCTTCCTTTTAAATAATTAGACCTTGTCCTGTGTACATTTAATGGG **ATTITAATCAGGCCATAATGCCAAATTTCTTTACTTCGGAAGGATCTTTATGGTGATGGTTTCA** NNNNNNNNN

>1182

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CGCTTGGATGTAGCAATGAAACAAAATGCTTGAGAGGTCTAGTGAATGGCATTCAAAAGGGA CCTCAAAGTGCAGACATATCTTTTCAAATATGTTACAGGCTGAACTGGCTCTTTGAACACTA TCACTGCTGCTTAAATCCAGGAAGCAGGCTTTAAAAATGCAAAAGGCATACAAGTTGTATTTC TGTGTCACCTGCCCCTCCCCCCACCCAAAGCCAAAATGAAGAAAAGACAGAACAAAACAAAA ACAGAAGAATTACAGATGACTTTGGAATCATTTAGGAATCCACTACTTCCAATCAGAATGTTT AGAAAAATACATTAAAGAATCATTTTTTAAAAAACACAAAAGTAATCTTGCTTTCTGAGACTGC TCTTCGGGTATAGAATGAGCTTCCGTGTGGAGTGCGTTTGAACTTTGACCTTAGCTGTGTGC GAGGTGCAGGCGCTGGGGGAGCTTCAGGCTGTGGTGTGCGAGTGACCGCAGGGGAGCGT GGGGTGCCCGCTGCCGAGTCAGCCGTTGAGCCCTTAGGTCGCAGTGCGTCCGTGGA TTTTAGTAATGTTCTCATCACTTTGTGACACACTCTGCTTCAGCATCACAGATTTTACAAATGG TTCAAATTCAATGAAAAAGATTCGCCAGAGGCTGAAAACATCAAGACCTCAAAAATATGAATG CTACAAAGTCGGAGCGGACGCgTgg >1185

caAAATGTAAAATAGCCTTTAGGACTGAattagaGtGAAGTTTTTTTGGTTCCAAAGccGT AGACAAAAAGTCTGCCTCATAAAGTTGGTCTCCAAAGATAAATTCCAAAGAAATTTATCCATC TTTAGACACGACACCAGCACATTTTTCTACTGATACGGTTTTACATAGTTAAGGACTAAATAA AAATTGATTATTCAGAATGATTATGTTTATAATTTGTTCTAAGAAACTACACTAAAAAAGATTTTT TAAAAAAGCTTCTATATTCTTTAAAATTTTCTTTGTGACCCCCACAACTTTTCAGAGAATATTG TTTACAGCACTGCCTATCACTGTTTCCATACTAAAATAATTATTTTCTCTTTATGCTATAATGAA **AGTTAAATTATGCTTAATCAAAATGACTATGGCTATGGGGTGGCACTCATTTAAAATTTTTCAG** CAATGAAACTTAAATTTATTACCTTTCTTAATGAATATAGAATAAAAGTATTGATACCTTTAA GCATACTAACACAAGAAACTAAAAGCAAAAATTACATATTTAATCTTCAGCTTTTAATAGATTA TATATATTAATATTCCAGGTTTTAAGGAATTAAGTTACATTAACAATAAAAAATATTCCATATAT TCCCTTATAAAAGGTTCTATTAATTCTAAGAGTTCTCAAATGGGCTTCAATAAGAATGATGGG TTTAAAGATGAAGGACATGACACGCTCAAAATTAAGAAAAATGCTGTATTTGAACTTGCAAGG ATAATTGAACACTTTGGTTATAACATACTTAAAAGATTTCTGTTAAAAATTTAATTTCCTTGTTTT CAAATTAAAAGGTAGAACAGTCTCCTGAAGGTAATGTAGGTGGGTCCCTTGCTTTTCACTTAC TATAAACTGTGCTAACCAATACATGGAGGTGAAGGGGGATATAAAACACAAATTATTTCATCA CTGAAATAATTAGCTGCTAACATGACTTCTAAAGAACAGGTATAATAAAAACTAAGAACTTAT TTCAAAATATGAATAAAGGCACTAATTACAAATGTACATTTTTTAGACAGTATCTTACAGTTCA TCTCTTGGAGTAAAGAATAATCAGTTTTCACGTTACTGTGACAGGAAAGATTGAGTGAAAACC TAAAAAATACTCTTAAAAAGTCTTACATGAATTTCCTAATCATGAACTTTTCCCAATCAGCACC GTCTACACTGATGCCAATTTCATCTTCAACACATGGCTAACATAAATCATTTCTAATCCAAAAC TAACCAAATATTTTTTAAAGGATTTACAAAATAAATTGTATTTTAAAAAATTAAATAGCAAATTTG AGTCTATACTAGTAGTTGGCAAAATACAATCAACTATTAAAAACACTTTTAATATAATGCTGAT GATACAAGAAGGCAGATAGTCATTTCATAAGAACAAATACAGGAGTACTAAGTATGCTTTTTC TCAGGACAGACTTAGGGAAACTACCCTCAGTACTTACGGTAAACAACACAACCAAGCAGAAA CAAACCATCCATATCGATTTATGTCTGCTTTTCGCTCATGTTCTTGATTATGGGTTATATTAAA AACTAAGTTAAACTACACTTATCCTCTACTTGATACAGAATCACTAAGAAAACGGCTTAAAAC AAAGTTAAACAACTACTTTCCAAAGCCCAGAAAGCTTTCCTTTGGCCACTGTTCAGTTCAAGG GTGTGCTCCAACTAAAGATAAATCAGAAAAATGTTACCACATTCGACTAAATTAACTTGACTA AATATAATAAACCAAGCACACCTGAAAAAAGAGCAAAATTTAAATCAACTTACAAAAATATTAA AATTAAAATACCAATTTTGAACACATATTTTGATATTATGAACTTTGTATCTTTTTTATCAAAATT AAAAAGTACTGCAAAAATGAAGTATTATTCTCTAAGTATTCATTTTATCCCTTTCATTTCAGCA AAATCACACATTTGAATAAACAGGATCGAAATACGACACTTGTCTTTCCTCTTAATTTAAGGAA TATATTGTTTAGATTATTGTTCATATTAGACAACTGCCTCAAAAATGTTTTAATGCCATCCAAT **AAATAAACTTTTGATAGATTATGACTTTTTTTAATTTTAAGTTGTTAAGAATATTAACTTTGAGT** CTCCTATTAATATTCTAAAAGCTAGGATTCAATTCAGCAGTTTCCTATAACATTTTAGAACCCA 

### Table 4

CTTCAAATTTTAAGAAACAAAATGGACTGTTCATACTTCGGCTTCAGCTACTGCCCAAAGCAG GATGCTAAAATATATTCCAATTGTCTTATTTTTAGTGCTGGTATGATTTACTAACTTCTGATAG TTTTATATGCATTGAATAATGTGATATTCTTAAAAATAACAGATTTATTCAAGAATATTTAACATC AGAGTGGACTTGATTCCTTTAGATAAATAAACAGCCTACTTAATTTCCATGCAAATAACAACTT **AAACATTATTCCATGACTCAACAGTAATGTGGGGGAAAGTTAAAAGGCAAGTACTCATGATGT** GGAATCTTCCTTACATATATCCTCTAGGCAGATTTCTTTACAGTAAGTTCTGTCCGAAA AGAATTGAAAGCAATTGGTCATTAAGGTTATAAGAATATTTCAGAAGACATCACGCATATGAC AAACATTTCTTACAAGGCAGTCACTGATTAATTAGAATAAACAGAAGAATTGTTGCTGAAAAC ATCTTTTATGTTCCAGTTCAGCTGCACTTGATTCAAGTGTTGCTCTCAGAGGTTTGTGTTGTT ATAAATTAAACATGCTGCCTTAGCAGCCAAAGGTACTAGGAAAAAATGTTCATGTCACAG **AATAAATAGAGCAGTCTCTTTCAAGCAAAAAAGTTATCTCACACCAATCCGGGAGGTCATCCA** CTCTAGACCTTGGCATAACCCTTCTCCTGTGAGAGCACAGCAGGATTGAATGTGCCATGGAT GATCCTTAATTGAACTAAGGGTGAGGTATTTCGAGATTTCAGCTGCTGTCATACACCCTTTCA TATCCTGTTTATTTGCAAAGATAAGGACTGCAGCCTTCCGTAAATCCTCATGAGCCAACATTC TGTATAATTCTTCTTTTGTAATAGCTAGTCGTTCCCTGTCAATGCTATCAACAACAAGAATGAT GAACTCTGTATTTGAGTAATATGTGTTCCAGGATGATCGCAGAGACTCCTGACCACCAATAT CCCACATAAGAAAATGAGTGTTCTTCACAACTATTTCTTCAACATTGCTTCCTATGGTTGGAG AAGTATGAACCACTTCATTCATTAAGAATTGGTAAAGAATGGTGGTTTTTCCCTGCATTATCCA **GTCCCACTATAATTACTTTGTGTTCTTGGTTACAGAAGAGGCTCCACAGTTTGGCGAAGATCA** GCCCATCACGAGCACCGGGGCGGGCCGCGGGGTCCCTCGGCAGCAGGTGCCGCTGCGC CGGGTCCCCACCGCGGCGCGGGCTGCGCGGAGCCGAGGAGAACCCGCCTGAGATCGCG GAATCCCCACCGGACAGCCCTTTGTTTCGAGCCCACTGAGCCCAACGCCGACCCGTAGTCC **CCTCGGTCTGTACCCACCTACCCGGACGC** >1186

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GCGTCCGAAAAAAAAGTCCTAAAAATGGAAAGCCTTCGAATGGTTTATAAACAAG GCAGTGCCTTGATCTGATTTGTGTTATAAAAATTTCAGTCTGGCTGCAATGTGGATAATAGTT TGGAATGGGGAAGAAGATGTTGGGAAGCTAACTCTCCTAGCAAGAATGATAGAATAGCTT

## Table 4

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aatattaGATGAAGTTtctcAaAcattccttgaGaCATggcaggacAGcgccaGGGATccTccttcAgGAA GAAACTAGATTTTACATTGGTACTAATTCAATCAAAATATTTAAAACATTTTTAATATGGAAACT GAGGCTTTTTCACTCTAAGAATCTGCCTCCAAATTCAAGCTGAAGATTTGGATACACTGTGAT TCTGAATAAACAGTCAAGAAACACAACATCAAACAATAAAAGCTTTTAGCCAAATGTACAGTA CTGCATTATAACAAGATGAAAAATAAATACTTGGTTAATCTGCTTATTTCATGCAAATTTGTCA GTAGGTGACCGTTATACCTTGCCTTCAGCTGAATTTAGAATTCTCTCTATATTTTTAAGATGTC **AGTCACCAAAGTAAATAAAGCCATTCTATAACATAAACTGTTAGGTCTATATTTTTTACTGCAC ATCCTAAGGACACAGCAGAAATGGTGGTTGGGAGGCCTTCCACATTTTTGGATGCTAATAGA** ACAGGCAATAGGCAGTTATAAATGGATACATTTCACGCTGGGGGAAAAAAGACAATTTAAGG **AAGTGAGCAGTTTCTGAGCAGGAATGTGGTACAGTATTAAGAATGGAAGAATAATACAATAA AATTCCACACTATATTAAGATAGAAAAAGTAGTGAAGAAAATATCATACCTGCACATAATGCA** TATATAACACAGGAGAAAACCTGTATAAAATTCCATGTATTTAAACCAATTTACAAATACAAAA AATTCTGTCCAAGCTCTGAGccttggTACACGACAAACGTTTACAGTGGATACATGTTAAGGAAA gtgtataata

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#### Table 4

CAAGTTTAAATGCTTATAACCCAAGGCTCAGCAATATTCTAGTTAATACTCTAGAGGAATGCT
TGCACAGTGCCCAAGAAGGTATTAAAAGAATGTTTATTCAGGTGTTATTTGTCATAGTGAAAT
ACTGGAAGCACTGTAACTGTCCATTACAGAAGAACGGATAAAAACTATTGTGACTAATTTATA
TAACAGTATAGCATACGGCAGAGAAATGAGTGAACTAGAGCTACATGAATAAATCTCAAAAC
GAATGTTAAGACAAACAAGGCCGGTTGCGGTGGCTCACTCCTGTAATCCCAGTACTTTGGGA
GGCTGAGGTGGGTGGATCACTTGAGGTCAGGAGTTTGTGACCAGCCTGGCCAATGTGGTGA
AACCCTGTCTCTACTAAAAAATACAAAAAATTAGCCAGGTGTGGTTCATCNNNNNNNN
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ACGCGGGGATAGTTGAAATGGAGGGCGGGGAAGTCAGGCAGTGGTTTCTGAAAGC CAAGAACTTAGTAGCACTGTGCCATTCTCTTGCCTGATCCAGTGCCATTCCCTTCACTTGATA TCTGTTTACTTTAGAGGAGGCAGTTTTTGAGAAAGGATCATAAATATCCTGGCCCAGTGCCC CAGGAGCTATGACAAGCAAAGGAACATACTTGCCTGGAGATAGCCTTTGCGATATTTAAATG TCCGTGGATACAGAAATCTCTGCAGGCAAGTTGCTCCAGAGCATATTGCAGGACAAGCCTGT AACGAATAGTTAAATTCACGGCATCTGGATTCCTAATCCTTTTCCGAAATGGCAGGTGTGAGT GCCTGTATAAAATATTCTATGTTTACCTTCAACTTCTTGTTCTGGCTATGTGGTATCTTGATCC TAGCATTAGCAATATGGGTACGAGTAAGCAATGACTCTCAAGCAATTTTTGGTTCTGAAGATG TAGGCTCTAGCTCCTACGTTGCTGTGGACATATTGATTGCTGTAGGTGCCATCATCATGATT CTGGGCTTCCTGGGATGCTGCGGTGCTATAAACGACAGTCGCTGAATGCTTCATGTACGTAA TATCCTAGGCTCGCTTCTGCTCCTGCAGGTGCGAGACAGGTATCCTAGGACCTGA AAACAAATCTAAGTCTGATCGCATTGTGAATGAAACTCTCTATGAAACGACAACGCTCTGAAG CGCCACAGGGGACAGTGACAACCAATTCCAGGAACGCCATACACTGAGTCACCAAGGACAC AGGTACAACATGCGGCGAAAACGCGACAACTGGCGCTGACTCCGGCGGCACACCA CAATGCACAACGCCCAATACAAGGCAAAAACACAGCAACACCACAGAGACACTGCAAGCAC CCATCCCAAATACAGAAAAACTACCTACGCCACACCACCGCCAAGCCAAAGCACGACAACG GCCAACACCCACAGACAGCAACCGGCGACAAACACTGGAGAACAAGAGCACACGCAACAA GAAAAAACGCGCCCAGAAAATGGCCCAGAACAGCGAACCCACGAAACAGAACAAAGACACA NNNN >1209

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NNAATNCACCGNGGTGGCGGCCGCTCTAGAACTAGTGGATCCCCCGGGCTGCAGG CTGTAGTGCTATTCCCTAATGAGCAACTAAGAGAAGACAACAATAAACCATGGAAGTGTT GGGAGGCCATGGAAATGATTTAGAGGTATAAAATATTCCCAAGTTTTTATTATAAAATTTTTATT CATAGGTTAAAACATATAAGCATAAGTGATTGTACAGGTGTGACTCCCTTTTCTAGGAGAGAA AATAGCTTTATTTGAAAACTCCAAAAGCTACTTAATCTTACCAGAGGTTTTTAATAGGGGAACT GGGTTTACTTACAATGAAAGCATATTTTCATTCTGCTATAGAAAAACATATCCCTGCTCATTCA GTAAATCTAAGATTGGAATGCTTTCTAGAACTATGCAATATTTGAATAATTTCTAGAAATGTCT AAGAAACAACCTTTTTTATTTTAAATCATCACTTACAAACGTAGTCTGAGACTGCAAACTAGTT TTCACTTGACTAATCCATCATTATAGATTAGTTACCATTTGCTCTATATAATCTATTGAAGAAA CTATTGTTATTCATATTTTGATTAATTTTACTAGCAACAAATTTTTATTTTAGTAGCATTGCATTT ACCTTAAATATGTAAAAATGAAGTTGTAACAGGATCAAATATGGAAATGGCAATGGTAACTCT GCCTAGAACATAGTTGAATGTCCTTGGTTGTCGGTAAGATGCAAAGATCTATACAAATTTTAT CATAGGTCAAAATTATTTCTAAATATACAAACAGTTTCAACTATTTCTTCCTCCCTAAAACTAA AACCAAACCAAACCCAAATGAAGAAACCTAAACTTCTTTTCATCTAATAGTTATACCCAACTA GATAATAGTAGCTTCTAGACATCAATAAAAAGATTTCATTTTAACTGTCTTTTTAATTTGTAAAA TATATGAGTATGGAATTTTGTATCTAACTTGAAATTTCAGATGTTTTAATAATCCAAATACGTT CTTCTTTAGCATGTCAAAGTACTAATAGTTAAAAAATTTCTTTAGATCTAAGCATATACATTACT TGACTTTTTCAAAAGTATCAAAAAATTGATAGCTGCAGAAATGCCATTATTTGATTTTCTAAAA AACATTGATTCATTCTTAAATGTGTATTCTTTAAAAAAATAGTAAATACCTCAAGAGTGACAGAA AACTTTCCTTTTCTGTTCTGTAATGCTAATTTAAACTTTGAGTCTTAGTTTACATGGTCATAGG GGTTAAATAAAATGTATAACTGTACAATTAATTGTGTCTTGTGACCTGATGATTTTTTTGAAAA TITGCTTTTCTCTTTAAGAAATTTAAGTTTTCAAGGGCCGTATTAGTTATCTAAATATTTTGGG CTAATGTTGACTTATAAATAAATAAAAATTTAGAAATATATTCATGATGACAATTTTGTTACTTA CACTGCCTATTCTTTATTTCTTTTTAGTTCAAAGGTGAAATTTTGACCTTTGTATTAACAAAG CCTCAAGAAAAGAGAAATTCTGCCTTTTAAACATTGGTTTTCCTTGCATTTTATGGTGGTGTG ATTTTGCCTCAGCAATAATAAAACATAAAATATGTTGTTGCATCAAGTTCAGTTTGTCTGCTGA GATTATTTTTAAGAACCAGGTTGAAGCCTCTATGCCTAAAAAAGCGTTTATTGTCTGGATACA TATAAAGCAAGATATATGGCTACAAATAAGTCTTGCAACCAAAATTGGTATATTAAAATTTACT GCACACTTTGAGATTGCTGCCATTTTTTGGTGCTTTTTGGACCTCGTCATAAAGGGATGTATC GTATATTAGGGAAAATTACTCAAGTTACACATTCTACATTAACTGCGCTGTATTATCTACAGGT ACAATCAATGGACCAATAGTTCCTAAATTAGTAATAAGGCTTACCTTACAAAAGTAATGAAATA ACACTGATATTTCTCTTTCAAAGGCTAACAGCAATTCTTGGTCCTGAGCTATTCAGTTCATAC AATAACTACTGTACATGCTACAACATCTGAATATTAATGGTTTTGCTGCAGATTCTGGGTATG AGGATTAGCTTGAAAGCAATACATTTGCTAACATGAATCATGACTCACATTATCCCCGTGTGC TTTACTACCTGTATATGAATGCAAATGTTGTTACAGAAAATATGCTTGAAATGTCAATACAGTG

## Table 4

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ACTCCATAATATAATCTTTTAAATGGGCAACTTCTAAATATTGATACAACCATTAATAA
TAATGCTTATAGGGTAAAAGAAAATTTTTGAAGCACTGAATTCAGTAACCTGGGTCATGGTCC
AATTTTGCTCACTACTTCATATCTTTTATGTAGATTATTCCTATAAACATGTTCCCTAAATTCCA
CATCAGTTTGTAAAGTCAATGGATTAAATTATTCAAATGTAGCTATTTAACGGTCAGTAACAAT
GCCTAGAAACCTATTTATTCATCTGTAATATTAAAAAGCTGAATTTGATGATCTTGAAAAATCC
TTTCCAGATTTACAACNNNNN

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ACTCCATAATATATCTTTTAAATGGGCAACTTCTAAATATTGATACAACCATTAATAA TAATGCTTATAGGGTAAAAGAAAATTTTTGAAGCACTGAATTCAGTAACCTGGGTCATGGTCC AATTTTGCTCACTACTTCATATCTTTTATGTAGATTATTCCTATAAACATGTTCCCTAAATTCCA CATCAGTTTGTAAAGTCAATGGATTAAATTATTCAAATGTAGCTATTTAACGGTCAGTAACAAT GCCTAGAAACCTATTTATTCATCTGTAATATTAAAAAAGCTGAATTTGATGATCTTGAAAAATCC TTTCCAGATTTACAACNNNNN

>1234

>1235

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GGGCTCGAGCAGTCTNCTGCCTCAGCCACCCAAAGTACTGGGATTACAGGCATGAGCACCC
AACCCATCCTACTCTGTGTATTTCAAAAATATTTTTTCTGCCCCTCTTTTTGGGAAAATAATAAT
TACTGCTTCTAACAGTTATGTAACAGAGTGTACATATCATGCCTTACAAATCTTTGCTGTTAAC
TGTAGCATCCAAAGATGATAGGGTGAGTACTCTGTAAGTCTGGAAGAACAGGTCACATTTAT
TCAGACTTCTCCCCCACAATTTTTAATCAAGCACCTCCCAGTAACAAGTTATTTAATTAGATC
GATTTTAAGTTGACAACAGATGTATCAGATGAGGAAAAAATTGAGCATGTGTGGTGTGATTAT
ATAATAGAATTGGTTTCTATAAACCATTTATAGTATTCAACTTTTATAGTATTTACAAAC
ATAATTAAATACTATCATTTAATATGCCTGATACTAACATATTTAATATATTTTTAGCATGGTTT
CAAAAATTTTAATTAGGAATTTTTGCCTTTTTATTATATCAGAAAGTATATTTTTGCAGTCAGCCC
TCCAATAAATCATTATGAATCTTGTAGTTGGTCCTGAACTTGGAGTGTTAAATTTTTGCAGTCAGCCC
TCCAATAAATCATTATGAATCTTGTAGTTGGTCCTGAACTTGGAGTGTTAAATTTTTGAATTTTGC
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# Table 4

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# Table 4

ATACTATTTATTTAAATGCGGAGAACATGGCTAACCATTCAGGACCATTTAATTATCAAATTAT TAATGATTCTTCCATAATAAACAAGCAAACTGTCATACTTGTTGACTTATATTTCATTCCATGG AATTCAAATTTAATTAATTGATAAATCACATTGTACTTTATAAGAGTTTATTCCTTAAGTGTTTG AATITACACTTTTTTCTCCTGTGACAGCATCTATTCCCAAGGCAATCAACATTTTAATGGAACG AACTGAGGTTTGCAATTGCTAATGTTATTCTCCCATCCCAGTTTCTACTTGTTTCTTGTAAAAA AGGAGGTTTCTAAATCTTGACTGTTGATTGACAATTAATGGGCTAAATTTCCCATTAGCAAAC **ACTTTTCACATATACACTAATATTAGTATCTAAATTATATTAAAATCTAATTTGGTAGCAATTGA** CTTGAAATTTGTGATACTTCAACTTGTGCTAGGTTGTAGTTTTGCTTGTATCACTCATAGTTAC TAAAAATGCAAAAGGCAAATTTGAAATAACTATAAAAAATAAACATTTAATGAACTTTTTAATATG CAATACTCAATTGTAAATAACCATTCTCTTTACTGAATCAGATGTTTCATTAACTGTTAGCAGT TATTTCGAGTTATTTATATATCACAGAATTTTGAACTAAAGATCATCTAGCTGAATTTCCTTTAT ATTAAAGAAGAGGAGAAAATCTTAATACTAAGTATGTGTGAGCCTGGAGCTGCCATGGAGCA TGTAGAGAGAGTCTCCTAGTTGATACCAACTCAGGAAAGCAGAATCAAGCAATAAAGAGACA TTTTGGGCCTGATGACATCATTTCAGCACCTGGATCCAGCGATGCCTAAAGATGTGACTCCT AGACTTTTCACTTACATGAGCCAAAACGGTTCCTTTGCATCAATAAATCGCTCTGTGATGCAT TTTATAATGTACAACCAAGAATCTCAATATTTATTATTTTTGCATTAAATATCAGTAAGTTTGATA TAAAAAGCTCAGTAAAATTCATTAATTTGAGAATGTGTCTATATCATAGTAAAGTTTTAAACCT ACATAATTTTCAATATTTATACCTTTTACTGCAAAAATAAAAATGAGTTTATCCTTGCCCTAAAG CTGTAAAATTAAACTCTGTACAATTCTAGTTATTTGAAAATAAAAATAAAATTATTGGTCATTTC ATGTANNNNNNNNN >1280

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GAATACATGTAGAACTAAGTGAAAAAGGAGAAGCTACTCAAAAGCTCAAAGAAGAATTATCT
GAGGTAGAGACCAAGTACAAAGAAGACGACTGTTTTCCACTTCCATTTAAACATTTTTAGCCA
CTTCATTTCTATTTATTGAACAGGTCAAATTTGTCTTGTTATTTGTGAGT
>1285

# Table 4

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GCGTCCGGCTTGAGCCCGGGAGAGGAGAAGGTTGCGGTGGGCCGAGATCGCCCCAC GTAAAGTATAAATCAGTGGGCTCAAGATTTGCAGGTACAGCCTTGTTAATGCCTTCAATAATG CTTACGTTCCTTGTCTTATGGGTTATAATTTTCACATCCTCTTCAGATACAATCTGAGAACTTG TTGACTACCTTTGTTACATGCAAAAATTTTCTATTTTAATATTGCATTATATTAATGGTTTCATA GTACATTCCAGTTCTTTATCTGAATACAAGCGTTTTGCTTTTATTTCCAGTTTCTTGGACCAGA ACAATAAAATACATAAGACATCGTTTCTATATGGTCATATACTATATAGAATAAAGAATTGTTA TGTAAATTATTAAATGAGTATACAGACCTTTACATAAAAACTAAGGTACCTCAGTGGAATCTG CTACAGTGCTTCCCCCTCCCTACCCCTCCATTTTGTTTATAACCTTTTAGCTATCTAAATAATA CGTGTTCCATACTCAGGATAGCTGGTTAGCTAGCAAAAGAATTAACATCTGTGAAGCCATATT TTGTTTCCGCATATATTCATTTTTAATGCATTCTGTAACTTTTCTCGAGTGGTGGTCATTGAGG GTAGGGAAGATTTTATTTTTTAAGTTGTCGTTAAGGTATTTCATTAGTGTTCCTGAGTGTAAAA CAGTTTTTTCCCAAATACTTATGGCAGATAAGAGCATTTTTGTAAATAATAAACTAGCACCGTT TGGGTAAATTTGCATTATTTTTGGACAGGTTCATTGTCATGTAAAACAAATATCTCAAAATTC ATTTTACATTTAGCAAAGGTGCAACATTTGTTTTTGGAGTTTGAGAGATATTTTCCTTGTCTTC NNNNNNNN >1288

NCCTTAAGCGTTGAAACCCGGTACTCAGTTGATACTCGAAGACGGGCCCCCAAAAG GGCTCTGTATTCCACAGCCATGAATTCCATCCGGGAGAAGGCTCGACGGGGTGGTACCATG GAGACTGATGACCATATGGGTTGCATCCCTGCCCGTAATTGTAAAGGGGAAAGGCTTCTGCT TTATATTGGCATCATTGACATTCTACAGTCTTACAGGTTTGTTAAGAAGTTGGAGCACTCTTG GAAAGCCCTGGTACATGACGGAGACACTGTCTCAGTGCATCGCCCAGGCTTCTACGCTGAA CGGTTCCAGCGCTTCATGTGCAACACAGTATTTAAGAAGATTCCCTGTAAGTGGTTTCTACC AATTGACTGCCTACTCCTGCCCAGTGGCTCCCTTACCCCAAGAGAACAGAGGGCAGGACAC CTCTGGTAGGGAGCTGCCAATGCCAGAGGCCTCTCCTTCCACCTACATCCCATGAGAGCCA TTTCTTGTCCTTTGTGTTAGTCTGTCATAGTCATTTCCAAGTTGCTGTTTCCCCCTTAGCTCTT

NNCGAGTCGGCCTTGTTGGCCTACTGGGCCATTTTGCTGCAGCCTGCGACCGAGTG GGAGTGGAGTGGAGCGCTGTGGTTGCCGACTCTTTCCTCTCCCCACGGTCCAGTCAGCG GGTTAATTAGGCCATCGGCCCTCGAGCCGAGACTTGTCTCTTATTTAGTTCTGGGGAGCGC CTCGTCGACATGAGTGATGTGGAGGAAAACAACTTCGAGGGCAGAGAGTCTCGCTCTCAGT CAAAATCTCCAACGGGAACTCCTGCTCGTGTAAAATCGGAGAGCAGGTCAGGATCTCGTAG TCCATCAAGGGTTTCCAAACACTCTGAATCCCATTCTCGATCAAGATCAAAATCCAGGTCGA GGTCAAGGAGACATTCTCATAGACGTTACACTCGATCCAGATCCCACTCTCACTCTCATAGG AGACGATCTCGAAGTAGATCATATACACCAGAATACCGGCGGCGAAGGAGCCGAAGCCATT CTCCAATGTCTAACCGGAGAAGACATACTGGCAGCAGGGCAAATCCAGATCCCAACACTTG CCTTGGAGTGTTTGGCCTCAGTTTGTACACAACAGAGAGGGATCTTCGTGAAGTATTTTCTC GATATGGACCATTGAGTGGTGTCAATGTGGTTTATGATCAGCGAACTGGGCGATCTCGAGG ATTTGCTTTTGTGTATTTTGAGAGAATAGATGACTCAAAGGAGGCTATGGAAAGGGCAAATG GAATGGAGCTGGATGGTAGAAGAATTCGGGTGGATTATTCTATAACCAAGAGAGCGCACAC ACCAACACCAGGCATCTACATGGGCAGACCAACTCATAGTGGTGGGGGTGGTGGAGGAGG CGGCGGCGGTGGAGGTGGTGGCAGACGTCGAGATTCTTACTATGATAGAGGATA TGATCGTGGGTATGACAGATATGAAGACTATGATTACCGATACAGAAGACGATCACCTTCTC CTTATTATAGTCGATATAGATCACGATCAAGATCTCGTTCCTACAGCCCAAGACGCTATTGAT ACACTTTTGTCAGTTGTTGCTGTTTTCCACCCATTTTATTATACTCTTAAAAGATGTAATTG TTGTCATTTTGAACAGTTAAACATCTTGAGTATAAAAAGAACCCCAATGTTATGTTATGCTTTG TTTTTAAAGCTTCTTTTGTGTTAGATACTGTATTAGAGATCTGCATTTATCATGAGTTCCTTTTT TTTTTTAACTTTATTTTTGGGAAAGTAACACATGAAGTAGTTCAGTCATGTCAGGTTTGTCTGG GGTGGAATGGAACAGTCAGGTAGTTGAAAGTTTTTTTTTAGAGATGAAAAGCTTGTGAACTC CTGTAAAACATGCTGTATTTGAAATACATCTGTTAAAAACTTAAAAACTAAAGTAAAAACTCTTT TATTCATACTACACTGTTCGTCGTTTACAACGTTGTGACTGGGCCCTGGGGTACCCAACTTC **GCCTTGCAGACTTCCCNNNN** >1293

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GAACCAAATCTTTCATGGACTTCGGCAGCTGGGAAAGACACACAAAAGGAATTGGACAGAA GCTTCTTCAGAAGATGGGCTACGTCCCTGGACGGGGCCTCGGGAAGAATGCACAAGGTATC ATTAACCCAATTGAAGCCAAGCAGAGAAAGGGAAAAGGTGCTGTGGGGGGCTTATGGATCCG AGCGCACCACTCAGTCCATGCAAGACTTCCCTGTGGTTGACTCAGAGGAAGAAGCTGAAGA GGAGTTTCAGAAGGAGCTGAGCCAGTGGAGGAAAGACCCAAGTGGAAGCAAGAAGAAGCC CÁAÁTACTCTTACAAGACCGTGGAAGAGTTGAAGGCCAAGGGCAGGATTAGCAAGAAGCTC ACTGCTCCCCAGAAGGAACTTTCTCAAGTCAAGGTCATAGACATGACAGGCCGGGAGCAGA AGGTCTACTACAGCTACAGTCAGATCAGCCACAAGCACAACGTTCCCGATGATGGGCTGCC GCTACAGTCCCAACAGCTGCCACAGTCTGGCAAAGAGGCCCAAGGCCCCCGGCTTCGCGCT GCCCGAGCTGGAGCACCTGCAGCTGCTCATCGACCTCACGGAGCAGGAGATCATCCA GAATGACCGGCAGCTACAGTATGAGCGGGACATGGTGGTCAACCTCTTCCACGAGCTGGAG AAGATGACCGAGGTCCTGGACCACGAGGAGCGGGTCATCTCGAACCTCAGCAAGGTCCTG GAGATGGTGGAGGAGTGCGAGCGGCGGATGCAGCCCGACTGCAGCAACCCCCTCACCCTG GACGAGTGTGCCCGCATCTTCGAAACCCTGCAGGACAAGTACTATGAGGAGTACAGGATGT CCGACCGTGTGGACCTTGCTGTGGCCATCGTCTATCCACTCATGAAGGAGTACTTCAAGGA GTGGGATCCCCTCAAAGACTGCACTTATGGCACCGAGATCATCTCTAAGTGGAAAAGCCTCC TAGAGAATGACCAGCTCTTGTCCCATGGCGGACAGGACCTCTCAGCAGATGCCTTTCACAG GTTGATATGGGAAGTCTGGATGCCTTTTGTTCGAAATATTGTCACCCAGTGGCAGCCAAGGA ACTGTGACCCGATGGTGGACTTTTTGGATAGTTGGGTGCACATTATTCCTGTGTGGATCTTA GATAACATACTGGACCAACTCATCTTCCCCAAGCTGCAAAAGGAGGTGGAAAACTGGAACCC GCTCACAGACACTGTTCCCATCCACTCTTGGATCCACCCATGGCTGCCCCTTATGCAGGCAC GGCTGGAGCCACTCTATTCCCCCATCCGTAGTAAGCTGTCCAGCGCCCTGCAGAAGTGGCA CCCCAGCGACTCCTCTGCCAAGCTCATCCTCCAGCCCTGGAAGGATGTCTTCACTCCTGGC TCCTGGGAAGCATTCATGGTCAAAAACATAGTGCCCAAGCTGGGGATGTGTCTTGGTGAGC TAGTCATTAACCCCCACCAGCAGCACATGGATGCATTCTATTGGGTGATTGACTGGGAAGGG ATGATCTCTGTCTCTAGCCTGGTGGGACTTCTTGAAAAGCACTTCTTCCCCAAGTGGCTTCA GGTGCTGTGCTCTTGGCTCAGTAACAGCCCAAATTATGAGGAGATCACCAAGTGGTACCTG TGAGGCACTTGATATCATGAACCGGGCGGTGTCCTCCAACGTTGGTGCCTACATGCAGCCA GAGGCCATGCAGGAGAGGCGGGAGGCTGAGAACATGGCTCAGAGGGGCATTGGCGTGGC CGCTAGCTCTGTGCCCATGAACTTTAAGGACCTCATTGAGACCAAGGCTGAGGAGCACAAC ATTGTCTTCATGCCCGTCATTGGGAAGCGACACGAAGGGAAGCAGCTCTACACCTTTGGCC GCATTGTGATCTACATCGACCGGGGAGTGGTCTTTGTCCAGGGCGAGAAGACGTGGGTGCC CACCTCACTGCAGAGCCTGATCGACATGGCCAAGTGAACTGTGGCAGGTCCAGAACCAGTC AGAGACTTGCCCCTAAGAGGGATGTACTGTAAATAAACAGTATTTTTAGATCACCTTCAAAAG GGTAACTTCTTTACTCAGGAGCTACTCCACATCAGGCCAGGTCATGAGGGAAGGATGTAAAA CGGGACAATGCCACGTAGGGCAGGAATCTTTATACCAAGTCCTCATGTGGGGTATCGTCCT CAAAACAGGACAGCCAAGTTGATGTTCTTTCCTGGCAAAGGAGTTCTCTGTAGTTCCTCCAT AGCAGCCTTCCCTTTAGTCTCTGGTGGCAGCTTCTACCTCAGCCAACACTGAGTACCTCACA ACGAGTTCAGTCAGTAGCAGAAGGATCTTCTCTCTTGTTCCTGATGATTTCAAGGTCCTCACA GTCCTGATAATCTGGTTCTTCCCGAAACTCCCAAATATCTATGGAGAGCTGTTCTAGCTTTTG CACAGGGAACCAGTGGACAGAGGTATCATTAÅATATGTCCATGTATTGTGAAGTCTGAGGAA ACTCAAGCTCCTCCAGTCCTTTTAAAATCTGAGCAGAAAAATTCAAGTATAAAAACTTCAGAT AGTCACAGTAATCCCCACTCTTCTGGGATAAATTTCCACTTTACTTGTCATCCCCACTTTACTT TTTAAAAAAATAACAAATAGGGTATTTTGATTTAAATGCTTTTGCACAATGAATTGGGCGCCC CAAGGACAGTGGATATCATGGACTGTGATACTAAGAATAAAGGAAATAAGGAAAAAACTAAG 

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# Table 4

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# Table 4

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NNNNNNNGCTAAGCAAAAGATTTTATAATGAAGAAAGATGAGTAACTAGCCTCTCA

## Table 4

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GCCAAATATGACCAAATTACTTTTATTTATATTTTTGATTTATATTTCAGCTAGATCTAAAAAG CATCTGAAGGAATTTACAATGAAAGATACCTATGCAATAACATTTAGGATAATCTTTGACATTT TGGAAAAATAAGAATTGAGGAAAAAAAGTGTATCTTTCAAGTAGATGCAAAGCATTATAATGA GTAACCTCTAACATTTGGTAAAAGGAAGTATACTGGTCTGTTAGCAGAGACAAACTTTTTTTA GAATTGAAGTCTGAAACAAACAAAAGCAATTCAATGTCAATAGACATTAAGCAACATAATAGA CAAACATCTCCTAAGGGAACATTTGTTACAGCTGCTCCTTCCCTGAACTGTGCTTTGGAAGAT AAGCTCTGTCCTGAGTCCAAACCAAGCCCTTCCAAGAGAGAACAAAGGTCAGAGATGTTGAA GATTCCAGCAAATTTCTCCTCTTATTTCTACCAAGCCTTTGTGAACATTGCTCTTCATTTTGGC GTCTCTGTAGTTAAAACTTTTTCTTTAAAATTCAATTAAGTTACACCAGAATTTACAGGCAAGA TTTTTTTTCATTGCTCCCATAAGCAAATTTGTTTTAAAATAATTGTAAATGAGGTATATACTT AGTTCTTGGTTAAAAAATATATTGCTTTGTTAAGTATTAAAGATTATTTGTAAGTCATTGTATTA ATAATACTAATAAAATTTATCAAGCCTTTATAGCAAGGGTCAGTGAATTACCACTGCCTGTGG GCCAAATCTAGCTCACTATCTGTTTTTGTAAATAAAATTTTATAATAGTACACAGCCACACTCA TTCATTTATTTTCTGTGGTTGCTTTCAAGCTACAATTGTAGAGNNNNN >1327

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NNGAAAGTGACCGTGTGCTTCGGACGGACCCGGGTGGTCGTGCCGTGCGGGGAC

## Table 4

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NNAGCTGCCGATACTACTACTACATTCGCGCCCGGCTGCACCAAGGATTGGCCCAT
ACCTGATATGATCCCTTCCAGTGCGGTTGCAGGGAATCTCTTATTCGATGTTGTTTTCAGCCA
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CAGTCGCCATGGAGCTCAGANNNNN

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NNNNNNNNAAATTTCCTATTCTGATAGCAATAATAAGAAGTAGGAAATTTCACATAG

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TCAGCAACCTAACACTGTGAGAAAGAATCCAAGTAGCAGGTCATTAAAACAGATGGCATTTA
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**ACATATGATGGGGCCAATGCACATACTTTTATCACAATCAACTTTTTCTTTGTATCC** CTTGTGATCACACTACGGGAATCTCTGTGGTATATACCTGGGGCCATTCTAGGCTCTTTCAA GTTCATTCCTTTGTGCAGAGTGTATATCTCTGCCTGGGCAAGAGTGTGGAGGTGCCGAGGT GTCTTCATTCTCTCGCACATTTCCACAGCACCTGCTAAGTTTGTATTTAATGGTTTTTGTTTTT CGCTCCTCATGGCCTTGGCCCTTTCTGAAGCTGCTTCCTCTTATAAAATAGCTTTTGCCGAAA CATAGTTTTTTTTAGCAGATCCCAAAATATAATGAAGGGGATGGTGGGATATTTGTGTCTGT GTTCTTATAATATTATTATTCTTCCTTGGTTCTAGAAAAATAGATAAATATTTTTTTCAGG CTGGGTGGGTTTTTGCCTTTTCTCTTGCCCTGTTCCTGGTGCCTTCTGATGGGGCTGGAAT AGTTGAGGTGGATGGTTCTACCCTTTCTGCCTTCTGTTTGGGACCCAGCTGGTGTTCTTTGG GTTGCTTCTTCAGGCTCTAGGGCTGTGCTATCCAATACAGTAACCACATGCGGCTGTTTAA CTAGAGGCGTCACTGTGTGTGGGTCCAGGGCTACTGTACTGACAGCGAGAGCATGTCCTCC GGTTGGACAGCACTATTCTAGAGAACTATGCTGGCGTGTCCAGTCACAGCCTCAGCTGTGC

#### Table 4

TGGACGACCCTTGTCTCCCTGGGTAGGAGGTGGGGGAATNGANNCGGGGNGTGNTTGTG
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TTTTACCCACATGATCAGCTGGCTGCCGATTCTCACTTGAAATATGGCTCTGCGCGTATTGG
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GTCCN

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CAGAATGAAAAGCTAAAGACACCGAGTACTCCTGTGGCTTGCAGCACTCCTGCTCAGTTGAA CACAGGCAAAGGATGATAGCCAGAATGCCATAGATCACAAAATTGAGAGTGATACAGAGGAA ACTCAAGACACAAGTGTAGATCATAATGAGACCGGAAACACAGGAGAGTCTTCGGTGGAAG AAAATGAAAAACAGCAAAATGCCTCTGAAAGCAAACTGGAATTGAGAAATAATTCAAATACTT GTAATATAGAGAATGAGCTTGAAGACTCTAGGAAGACTACAGCATGTACAGAATTGAGAGAC AAGATTGCTTGTAATGGAGATGCTTCTAGCTCTCAGATAATACATATTTCTGATGAAAATGAA GGAAAAGAAATGTGTGTTCTGCGAATGACTCGAGCTAGACGTTCCCAGGTAGAACAGCAGC AGCTCATCACTGTTGAAAAGGCTTTGGCAATTCTTTCTCAGCCTACACCCTCACTTGTTGTGG TCAGTTGGAAAATTTGTATGCAGTAATCAGCCAATGTATTTATCGGCATCGCAAGGACCATGA TAAAACATCACTTATTCAGAAAATGGAGCAAGAGGTAGAAAACTTCAGTTGTTCCAGATGATG ATGTCATGGTATCGAGTATTCTTTATATTCAGTTCCTATTTAAGTCATTTTTGTCATGTCCGCC TAATTGATGTAGTATGAAACCCTGCATCTTTAAGGAAAAGATTAAAATAGTAAAATAAAAGTAT TTAAACTTTCCTGATATTTATGTACATATTAAGATAAATGTCATGTGTAAGATAACTGATAAATA TTGGAACTTTGCTAGAACAAGACCCTGTAGTAATAGTAATAGTTGAAGTTTGGCCAACTC TTAATAAAGTTATTTTGGTAACTAATGTTTTATGGCACTTAAGAATAATTAGCAGCGTTAAATT TTGTTTGTATTAAGCACTTTTAATTTTATCCTTCCTAAAAATAGTTTATTGTATCTGACAAGAAA CTTACTTAACCATTGTGTCCTTCCCATCTTTTTTGTCATCTTTGTTTTCTCAAATGCCCTCCT CCCATCTGCCTTGAGATTCCCTTGTCTTCACTTAAAAGCCAGAGTGCAAGTCATGATTTGCG GGAGGGCTCTTGAACCACTTCTGGCTGCACCACAATTCTGTACTTGAGTATCACAGTCATTG TTTTTGAGACAAACATTTTTATAATTCTAATTTGGGTTAATAAAGATTTTAAATATTCTTGGTT TACTTTTGTAATTATACACAACAAATGTATTAATAACTACCTTGTTAAACACCCTTTTAATAGC ACAAGGTTTTTATATTTGCAAGCTGTTGATATCTTTCTAAAACTGTTTAGGTTATAGTCTATTG ATACTTTTTATATACAATTTTATAAATATAAATATTATAATTTTATATTAATGGTACCAAAAATAC **ATTTCTTAAGGTTAAAAGCATGCACTTCCATGCATACTTGCTTTTTGGGGAGAGTGGGGAGAA** GACATTCTAATAATCAGTTTGTGAAATAGCTTCTGTTGGAAACCTTTTGAGGGGAATAAGGAA TGGTCATCTAAAATGAGAGATTCTGGATTTTAATGCAGTTCAAAGTTGAGCTGTATTTTTGTT GTTGATTTATCTGGATTTTTTTTAAAGCCTTCTAAAACCCAGTGAATTCAATACCTTAATTAGT ACATACTATCTTATGTAATGCATAAAGCAATGCCAGTCACTGAGAACATTTAAATATATTTATA TTCCTGGAGATACACATTCTCATTTTTGTTGGTTTATTATAAATTATTCTTCTAGATGCATCTTT TATAACTAGGATTTCATTTTGTGTGTATAGCTTATGTAATAAATTTTAAAGGTGAAAACTCTCT TAAATTTGTTTCTATTTCTTAAGTATTTTAAAACATAGCAAAGATAATTCTGTGCAAAAGAAGT GTAAAGTCTGTTCTTTCATATATTACTGTGAAAAATTTAAAGTGCTGTTGACACTGGAATGTTT **TTATATGGTANNNN** >1378

NNGTGCGATCTCGGTTACGTGCGTTTTCTCGGAATTTTATTTCCGCTCCCTTATTTG GGGGNCCCGCGCGATTTCCCCACCGTGGGGACCAAAAAAACTTGGGTCCAAGGAGAACC AAAGTACAACCATAGAGGATGGTCTTACAGCAGGCAGTATCCTGTTTGAGGAAAGCAAGAAT **ATACTAAGGAACCAACAATCTTCCTGTTTAAAAAAACCACATGGCACAGAGATTCTGAACTAAA** GTGCTGCACTCAAATGATGGGAAGTCCGGCCCCAGTACACAGGGGCTTGACTTTTTCAACTT CGTTTCCTTTGTTGGAGTCAAAAAGAACCACTTGTGGTTCTAAAAGGTGTGAAGGTGATTTAA TTCCATGACATCAAGACTTTGCTAAAGACATGAAGCCACGGGTGCCAGAAGCTACTGCGATG CCCGGGAGTTAGCCCCCTGGTAATAGCTGTAAACTTCCAATTTCTAGCCATACGCTCAGCT CATCCATGCCTCAGAAGTGCATCTGGAGAGAACAGGTTTCTAAGCATAAAAGATGAAAGAGC AGTTGGACTTTTTAAAAATTCAGCAAAGTGGTTCCCTCTTTAGGGACAGTCAAAACCAAGTC **ACTTAGGTAGTACCAAAATAAATAAGGAAAAGCTTAGCTTTAGAAACAGTGCAACACTGGTCT** GCTGTTCCAGTGGTAAGCTATGTCCCAGGAATCAGTTTAAAAGCACGACAGTGGATGCTGG GTCCATATCACACACATTGCTGTGAACAGGAAACTCCTGTGACCACAACATGAGGCCACTGG AGACGCATATGAGTAAGGGCACTGACGGACTCATGATTTCTTCTTACCAGATGCTTTCCTGT TCTTTAAGAGTTTAAAATCATCAGAAAGGAAAAACAAACTCTATATTGTTCAGCATGCAATACA TACCACGCTAGGGCTGGCTCAATTGAAAGTGGGCAAAAGCTTACAAATACTAAAAAGAAGTG

# Table 4

CTGCCGCGCAGTGTGGAGGCCACTGTTTGGAAATAAATCTTCCTAACACTACGACTTTTCAT GTTTTGGAGTGGACTTTTAAAAAAGTTTTCCAACCACAATGGAAACAGGTTGAACCACACTGC GCCTACACATCCATCCATACGTCAGCCATTATAATCAGATTCTCACTGGGGGAGGCATTTTC TTCCCAAAGGAGCTGTATGCAGTCATCACCCGGAACTAATGGGAAAGTGTTCTTAAGCAGCA AGTGACTCTGGACCACCTCTCTCACACACTGACTCTTCCACAGCATCTTCACCTGCTTCTGTT TCACTTGAATTCATACAGTAGGCCACCATTTTATAACAGGTCTTAGTGTAAATTCTTCCAGAC CAAGTCTGAGATAGTCTTGGTTGTAAAGCAAGACCGTCACCCCTTCTCCCAAAGCCAACATT ATAAAAAGATTCCATTGTCTCAAACACAAATGTTCCAGTCTTGAGCACTTCCCAGCCATGGTG ACTCGGGCATATCCTGGCAGTTGGTGGATTTTGCCCTGTAACACAATCCTTGTGGATATGAT TCAAAGGTGACTTTAATTCAGAGAATGTGTTTTCCTTTTCTGTTTTAAAAAATATTTGAATTAAGT GATGGAAATTCTTTTGTTAAACATCAAAAGCTTTCTCCTTGAAAAGATGCTTGGTGTATCTGA AAGTCAGGTGGGACATTTGGTGCATTCAGAAGGTCAAATCATTCCTGACCTCTCCTCTTAGG ACCCAGCATTAACTGCTGCGATACTCAAGGCTTCCTTAAAGGATCACAGCACTGGCGCCTAG TTTTACTGTCCAGCAACTTTATTAGTTGTGCTAGCTGAGAATTGGACCATAGAGGCCTTTGAC CCTGCCGTCTNTNTCAAACNAANNNCNNCCCCCCNNNGNTTCNNCCAACAANNNNNNNNN NNNNNN

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ACAGTAATTTTGGAAACCTCTTTGATGTCTGGCTTATAGAAGACACCTGGGTTCTTAT ATCTGCTTCTGAATTCGATCTATTGTAATGTGTTATTTTGGCTGAAGTATGTGAAGAAAATACT **ACCTTACAAAGATATGTATTTTCAAAAGGAAATACATATCAGAAAGTTTGACAGAGCCAGTGG GTGATACTAAGGTTGTCAGGATGGATGATGTCTATCTGGAGAGCTGGCAGGAAACAACCAA** TGCGTGATTTTAGCTCTATTTCAATAACTTTTTCAGAAGACTGTAGATATTCTTCTTTGATACT ACATCAGAACTTTGCAAGTAACTTCAAGTAGTAATTTCGTAATATTCTTTTTAATAATGTGTAC TTTTCCTATCCTATTACAGTAAAAGCCCTTTATATATATCCTTGTACCTTGGCTGGATCTTCT **ACTTATTCTTGATTTTGTAACATCATCATTGGTCATCTGGAAAAATATTGGTTCACTGAGTTATG** AAGCTTCCAAATGTTGACACGTGTCATTATATATATTTTTAAAATCACATTTGTAAATATCATC ACCAATCTCATCAGATCAGTCTTTTAAGTGTCAAGGGAACCTGTCAAGTTCACAGTTTGCCAA AATTCTAATTTTCTTTCATCTGGAAGCTCCAGTTATATATTGGCAATGAATACTGGGAGTTGTT TTCCTAGAAGTGACAGGCCCACCCCACATCTGAATAACCAGCTAGTTCACTTTGCCATTCAGT TGTCCCGTTTATACACATACATTATTAAAAAGACTGATGCTCAAGGGTAAAAATTTAACAAAAT **TAATAATTTGCACT** 

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NNNNCGCGGCCGCGTCGACACGGCTGCGAGAAGACGACAGAAGGGGGGAACGCTC GGCGCTGCCGGGTGAAATCGTAGGACAGTGAAGATGCTGCTGGAATTGTCCGAGGAGCATA AGGAACACCTGGCCTTCCTGCCTCAAGTGGACAGCGCGGTGGTCGCCGAGTTTGGGCGGA TTGCTGTGGAATTCCTGAGACGCGGCGCAAACCCAAAAATCTACGAAGGCGCCGCCAGAAA ACTCAATGTGAGTAGTGACACTGTCCAGCATGGTGTGGAAGGATTAACGTATCTCCTCACTG AGAGCTCAAAGCTCATGATTTCTGAACTGGATTTCCAAGACTCTGTTTTTGTTCTGGGATTCT CTGAAGAATTAAACAAATTGTTGCTTCAGCTTTATCTGGACAACAGAAAAGAGATCAGAACGA TTCTGAGTGAATTGGCACCAAGCCTTCCCAGTTATCATAACCTTGAATGGCGACTAGATGTA CAGCTTGCAAGTAGAAGTCTCAGGCAACAGATTAAACCAGCAGTGACTATAAAGCTACACCT TGGTTCAACAACTGGAACAAGCATTGGAAGAGATGAAGACAAACCACTGTAGGAGAGTTGTT CGCAACATCAAGTAGTACCAGTTTTAAGGTTTTAATTCATTTGAATCACTTATGAATTGATGAT ATACAGCAATTACTTTTCAAAATTAATTTTTTATTAATTCATGATGATAAATACATAGTATTCCT CAGTATCTATTCCAAGATACTGAGGTCATAATCAGAAGCTAAGCTGGGTGCAGTGGCTCATG CCAGTTATCCCAGCACTTTGGGAGGCCGAGGTGGGCAAATCATGAGGTCAGGAGATTGAGA CCTTCCTGGCTAACATGGTGAAACCCCATCTCTACTAAAAAATATAAAAAATTAGCCAGGTGTG GTGGCACGCATCTATCAGAGTCCCAGCTACTCAGGAGGCTGAGGCAGGAGAATCGCTTGAA CCTGGGAGGTGGAGGTTGCAGTGAGCTGAGATTGTGCCACTGCACTCCAGCCTGGGTGAC AATCAGAAGCTAAAGTAAAGTTCCTTTCCTGGTGCTAACTGTGGTCTTCTTGACACATTAAGA

# Table 4

TGTATTTTGTATTTTAAGAGTCTCATGCTCTACCGTTGGAACTAGCCAGATGGCCATTATTTT **GTATTTTAAATACATAAATAGGATTGAATCAACTAGAAATGAATCTATATGTTCTGTATATATG** AATGACTATCTTGTTTTTGCTACTTCTTTTGACTGCTTAATTTTATTATTTTCATCTTTATTGATC AAATTTGAAAATAAAATTCACAATGTAATACTACTACTATGCAGAATTTTCTAAACAGTTCAGT **ATTTTTGACTTTTAAAAACACCCCACAGTGTTAATAGCCACAGAATATTGAACATCAATAGGAT** TTTTAATGCTATATTGTTATAGGCAGTTTATTCATTTTTCTTTGTATATGAAGATGATAAGTATC ATATTGCCTAAGTTTGAGTGATCATGGTTAATTAATTGGCTTAAATAGTACTCAAATTTGTGTG GTCGTATATTGTATTTTATCAAGGACTAATTCTTCCACCATACCCAAAGCATCTAGGAGACAC TCTGTCATTTACATTTACAAATAATGGATGCAGAGAAATATAATCAATTCTTGATTGTCCTGGA TTACATTATAGGCAACTATCCCTTCTCAAAACATAACTTGATTTATGTTTTGTTTTATTTTTTAG TAGGGAACCAAAAGCTTTTGGTCTGAAAAACTCAGGTGCTGATTTGTCAGGTCAGCCTGAGA GAGTGCAGAGATACTGAGGTCAGCTTAGGGAGAGAATTGTATGGAAGGGTGGAAATGAGG **GTTCAGTCTTAACTATGTGTCCAAGACCTTATCCTGAGAGTCTTCATGGAATAATCTAGAAAG** GGCTGTAGAAGCAATCAAACTCTAAACTGCGCTCTAGACTTTGTCAATACTTTGCTTCGTAAG GCAGGGAATAGGCTAGTGGAAGAAAAACATACTTGAGATGGTTACCCATTGGTCCCTGCAG GCATCTGGGCCACCCTTTTCCTGTAGGTATATATTCTGCCGTTGTGAAACAACTATATTATTA GATGTCAGCAAACTATAATCAGAAATAATTTTTAATTATAGTGGCAACTTGATTAATGAAGCTC TCATATACAACCTCACAAACAAAAAGAAACTTTATTACGTGAAATAGTAGCATATGTCATTGG GTTTAAAAGCAACATGCCTGCAAAACATATGATAAAAAAATACCTCTGTAAGGGTTTTTATTTGT CCACCTTCGATGGAAGGTAAACATGGCTGATCCCAGCCAAGATGAAACAATAGCCCTTTGTC TCCTCAGAACAACCTATCTCCAACTCTTTGTCCACTGTTCTTACCCCAATTAAAACAAGAAAG CATGTGCTAATCCTTTTTTAATTTTTATCAACCTGCCTTGGCCTCCTTTCACTGTACTCCATTA TTCCTTCTGTGATGTTCTACCTTCTTCACCTTTTGAGACCAGGGTGAGTTGGGAGCAGTTTG CCTACCTTCTTTTAGAATCTGGGGCTTATCTTTTAGTACAAGCCATTGAATAAGCCTCTTCCTT GATATTTGTTGTAGCTTGTATATGAACATAATTTTCTTTAGAGGTAGTCACTGTTCTCTCCAGT ATGACCCAGGTTTCTTGACTCTGAGTAATGCACCTTCTATAACTATCTAAATTTCTACTGAAG CTTTTTGGATTATGAGTATGCTGACTTTTCACGATTGGCTGGTGCATGTTTAGACTTAAATGT CATATCCTTCATGTCTCAAAGCCAAAATAGTAACATCTCATCTCAGAACAGAGCTGTGACCAC **ATGCCAATATATGTGTCACAAAGTCTACATATGTTACATTCCTTGGAAGTCTCCTTAAATGTTT** CACAAAATGTCAACAAGCTTGTTTTGTTATTGATATTTCCGAGATTGGGCACATTTAAGACAG TAAACGGGAAAGGTGGTGAAGATGCTATAAGAAGATGCTGTATCTTGAGAATTGAAAAATGA TTAAAATTCATAACAGTATGTGCCCCTTCAGCGTTTTAATCTTATGAAGTGGTTAAGAGATAA GTCTTCGGAGTTGGACAAAAGGATTTGAATTTAGGTTCTGTGGATTATTATGGGTCCTTGATA **ACTCGTAAGGACTATATGAGACCATGTATATAGAATGTTTAACATAGTACCAGGCTTTACAAA** 

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NCCGCTTTGATATGAATTATTATGCAAAGAATGACAGACATAGAGACTGCAAAGGCC
AAAGGGACATATGTCTGTCATTCTTTGCATAATAATTCATATCAAAGGGGAGAAACAGCTATT
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TAGGACCAAAGGTTTAAAGACTCTTTTTCTGGGGCATGCTATTATTTAACAGTTTTTTCCTAAA

NNNNCGTCCGAGTGGTGCTGTTGCCGTGACTGTCTTCCTATTGGCGCCGTGCAGAG AGGCGGAATGTTCAACTCCTAACTGCGGCGGAAACGTGGGAGCCGCGGGGCCGCTGTCG GCCCGCCGGGAGCCAGATTTTGTGGAAGTATAATACTTTGTCATTATGAGATGTCGTCTC TCGGTGCCTCCTTTGTGCAAATTAAATTTGATGACTTGCAGTTTTTTGAAAACTGCGGTGGAG GAAGTTTTGGGAGTGTTTATCGAGCCAAATGGATATCACAGGACAAGGAGGTGGCTGTAAA GAAGCTCCTCAAAATAGAGAAAGAGGCAGAAATACTCAGTGTCCTCAGTCACAGAAACATCA TCCAGTTTTATGGAGTAATTCTTGAACCTCCCAACTATGGCATTGTCACAGAATATGCTTCTC TGGGATCACTCTATGATTACATTAACAGTAACAGAAGTGAGGAGATGGATATGGATCACATTA TGACCTGGGCCACTGATGTAGCCAAAGGAATGCATTATTTACATATGGAGGCTCCTGTCAAG GTGATTCACAGAGACCTCAAGTCAAGAAACGTTGTTATAGCTGCTGATGGAGTATTGAAGAT CCCATGGATGGCTCCAGAAGTTATCCAGAGTCTCCCTGTGTCAGAAACTTGTGACACATATT CCTATGGTGTGGTTCTCTGGGAGATGCTAACAAGGGAGGTCCCCTTTAAAGGTTTGGAAGG ATTACAAGTAGCTTGGCTTGTAGTGGAAAAAAACGAGAGATTAACCATTCCAAGCAGTTGCC CCAGAAGTTTTGCTGAACTGTTACATCAGTGTTGGGAAGCTGATGCCAAGAAACGGCCATCA TTCAAGCAAATCATTCAATCCTGGAGTCCATGTCAAATGACACGAGCCTTCCTGACAAGTGT AACTCATTCCTACACAACAAGGCGGAGTGGAGGTGCGAAATTGAGGCAACTCTTGAGAGGC TAAAGAAACTAGAGCGTGATCTCAGCTTTAAGGAGCAGGAGCTTAAAGAACGAGAAAGACGT AGATTGGTGCATGGACGGAAGACGATGTGTATTGTTGGGTTCAGCAGCTCGTCAGAAAAGG TGACTCTTCAGCAGAGATGAGTGTATATGCAAGCTTGTTTAAAGAAAACAACATTACAGGGAA GCGGCTGCTGCTGGAGGAAGAAGACCTGAAAGACATGGGCATTGTCTCCAAGGGGCA TATCATTCACTTCAAGTCAGCCATTGAGAAATTAACCCATGATTACATAAATTTGTTTCACTTC CCACCACTAATTAAGGACTCAGGAGGTGAACCTGAAGAAAATGAGGAAAAAATAGTGAACCT GGAACTGGTTTTTGGTTTTCACTTGAAACCAGGAACTGGCCCACAGGATTGTAAGTGGAAAA TGTATATGGAGATGGATGGGATGAAATTGCAATAACCTACATAAAAGATGTGACATTCAACA CTAACCTACCTGATGCGGAGATTTTAAAGATGACAAAGCCACCATTTGTAATGGAGAAGTGG **ATTGTAGGAATAGCAAAAAGTCAGACTGTGGAGTGCACTGTCACATATGAGAGTGATGTTAG** AACTCCAAAAAGCACTAAACATGTCCATTTGATTCAGTGGAGTAGAACAAAACCTCAGGATG AAGTGAAAGCAGTCCAACTTGCCATTCAGACATTATTCACCAATTCAGATGGCAACCCTGGA AGCAGGTCCGACTCAAGTGCTGATTGCCAGTGGTTAGATACTCTGAGGATGCGGCAGATTG CATCCAACACTTCTTTACAGCGTTCCCAGAGCAATCCTATTCTGGGGTCACCGTTCTTCTCAC ACTITGATGGCCAGGATTCCTACGCTGCTGCTGAGACGCCCCAGGTGCCCATTAAGTA TCAACAGATTACACCTGTGAACCAGTCCAGAAGCTCGTCTCCTACTCAGTATGGACTGACCA AAAACTTCTCTTCCCTACATCTCAACTCTAGGGACAGTGGCTTTTCCAGTGGCAATACTGACA CCTCTTCAGAGAGGGGTCGATACTCAGACAGAAGCAGGAACAAATATGGACGTGGTAGTAT **ATCACTCAATTCTTCTCCTAGAGGAAGATACAGTGGAAAGAGTCAGCATTCCACTCCTTCAA** CCTGACTTCAAGAGAAGCCCCAGGGACCTCCACCAACCCAACACCATACCAGGGATGCCTT TGCACCCTGAGACTGACTCAAGAGCCAGTGAAGAGGACAGCAAAGTCAGCGAAGGGGGCT GGACAAAAGTGGAATACCGGAAAAAGCCCCACAGGCCATCTCCCGCCAAAACCAATAAAGA GAGAGCCAGAGGGACCACCGTGGATGGAGAAACTTTTGATGAATTGAACTACATAGCTTTT AGATTGAATTAACGAAAAGACAACACTTCCAGTTTTTGGATTGGGAAATACCTTCTAATTGAG **ACTATAGCCAAACCAGGGCCAAAATTATGGATATTGGTCACCCAGTGATCATAACTAGGCTT** GAAAATCACTACACATATTTTCTGCCTTGAGTGAACATTTTTAGAGGAAAGGTTATGCCATCT TTTTACCCTAACCACTGATATTCTGGTTAGCAGGGCCAGGACAAGGGGAAAAATGAGGT CAACAAAAAATCAAATTTTTAGGAAAAGATAAGATGAATGTTACTGATTTTTCCTTTTGGCTG AGGCTGCAATATGGCCTGGCAAGGCACTGTTACTGATCTTGTCTTTAACATTTTGATATTTTG TTCATCATAATTTTTGCATTATTTTTTTAAATATTGCATTAAAATATCATTTAGCTTGATTATCG 

## Table 4

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- >1389
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NNNNNNNNNNNNNAAAAGTGATTCAAACAAAACAATAGAATTCTGCTTCTATACATG
AGAGGATAACTGTTACAGGACACGCTCTCCTACCATAAACAGCTAGAAAAGTTTACAAGTTAT
TTGAAATAACTGTTTTCAGACATTAAACAACTGGCAGCACAGGACTGTGATCTCTGACAGAG
GGAAATACACGAAGTACAACTGCCCTACATTTCTGCCTAAAGGCAATTTCCAGACTACACAG
ACAGAGAGGAAATGCACATAGAGCCCAACTGTCTCTGAAAAGAGACAAGAGAAATCTAATTT
CTAGGGGGTAGCTAGAATTTTCAGAGCAATGTCCTGGAGAAGAAGTTGTGCACAAGAAGATA
TTCAAAAATCATCATGAGGGACCCCTTGAATGTTTGGGAGAAATCAAATCTGCTTATGTATAG
GGTGAAAGACCACAGAGCTGATCAAAGTGCAACTATCAGGATCAAGAACAAATTAACGCGAA
GGTCAAGTGTAAGCNNNNNNN

- >1394
- >1395

NGTACTCGGTGTGTAGTATTTAGTTCTGTGACTGTGTGGTCGTCTGCTCAGATAGTG TGCGATGTCGAGTGGCGGATCGCTTAGTGGGTTTCTCGCGCTGAGGGATGTATGGGCGTC GTGTCAGTATGTGATCATGGACTGTTGATGGTGTGGCGNTACAACAGCTGGNCGGGT ATATCGATTGCTGGCTCCCTGGGTGAGACCGGGAATGCCCTCAAGCCCCATGGGGTTGTTC GGCCGGGTTCCCGGGCACGCGGGCCCAGGGTTCACCACCCAGGGCCCGGCCCCCAAC TTTTTTTGTTTAAAGGTTTCAGAAATTATTTATTGTAGTAGTACTTACACGTAAGATTTTAGCCT ATGGTCATTTTATAAAGATGACTGTTAGGATTTAATTCACATTTAAAGAAAATGAGATTCGTTA TATTATGGTGTTTTTTATGACCTATAAAATACTTACCCCTACAAATTTCCATAAATGTAGTGGT TATTTAGGAAAAAGTTTTATGTATTAGGGTAAAGTGGTAGAAGTTAACCTAGAATCTAATAATC AACGTGGAAGCAATGAGGTGGGCAGATCGCTTGAGCCTAGGCATATCGCCGGACGCGTGG **GTCGN** 

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NNNNNNCACAACCAGGACTGGCCCTTAACCAAATGGAGCCCCATTGGAAATAAA GCAAATCCCGCAAACGGGTACTCCCCGAAAGCAGCAATACGGCCGCCTTCGGCCGGGAGA GACTTTACAAAAATGAGGGCTTTTATTTTCCATTTGGAACGTGGGACAACAGACCACAACGC AATTCCATTTTGCAAGTCTTTCCAAGGGAGAAGCTGTTCAACCACCCGTTTGGGGGATGAGT GAGCCGACACTTTCCTTTGGTCTTTCTGAATCGTAACTGCACTGCTTTCTGGACCATTTCTAA TACTGAAGCATGAGCTTAGGAGTTTCTGTTAGTGGTAGTGGTGTTTTGGACACTTCATTCCTT GCAACACCGAGGTTTTGGGTGTTGACATAAAGTGGACCACACACCACATCTGCTGCCGTCTT GACACTTTTTTTGTTTGGTTGGTTTTGTTACATCTTACATTATGCAGAACTATTTTTGTACAAA TTGTTTAAAAGTTATTTATGCAAGGTTTGAATGCATACCAGTGTTTTTATTGTTTTGAGATTGC CAATTTTCCTGATTTCCTTAAGGTAGGAGAGAATTTAACGTGTACTTCATCGACACAACCCAT CTACAAATGTGCCCAGATCTAACAAAGTAGGCTAAGACCTTCCACTTAAAAGCATGTTTAACT GGAAGTTGAGAGTCTGCTTTGTACCTCAAGAGTTACATGAGCATGTTGTGGATAAATGTAAAT TATAGTCAAAGTAAGATACTCTGCCAAGTTTCCTCTGTAGAGAATTCACTTTTCTCAAATTTTA AAATTTCGACTTCAGCCTTTGCACTCAGGAGGTTCTGCTCCAGCATGAGCTCTTGTACTTACA CTTTTGCTTCTCCTCTGAAGTGTGAGTTGAGTTCTCATTTAGGTTTGTAACATGGCTATTTC CTAGTTGTAAAGTTCTGCATTTATAAGTGCCATTGTTGTAAGGTGGTGTTTCCTAGACCTTCC TTTGAGGGTTTCTGTTCTAGGAGTGGACTAGAAGTTTAAGCCCAGAGTCAGTAAACACTGTT TTGAAGTCCAAACAATGTAATTTATGATTCATACGATGTTACCCTGTGGTGCGACATTTCTCT TTCTTAAAATAGCAAGCAAGCTGTTTCTGGCTCGTAAAGGTAACGGAGAAGAGCTGCTCTTA CCACACATAATTAATTTCATGGCTACTTGCCATTACCANNN

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# Table 4

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NNATGGATTTATGCATAATTCCCCATTACCCCCTTGACCGGCCGCCCGGGCAGGTA CCTGGCTACAGTAAATGCTCAAGGCCCTTTGTTATTATTTCAGATGGCCAAGAATAAATGTTT TTCAAGGATCTTCTTTTTGTAGACAACTGTGTAGTCACAGTTTACAGTCGTAAATTATCTGCCT GGCAAGATACTTTTAAAATTAAAATGTAAAGAACCTGAGGGGATTCACTCCCAAATGTTTAT GGACAAACTGAAAGGGCATTTACACAGATATTACCTTCTACATTTATGTGAGAAAGTGCTTTA AGACACTGTACCTCGGCCGCGACCAC

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